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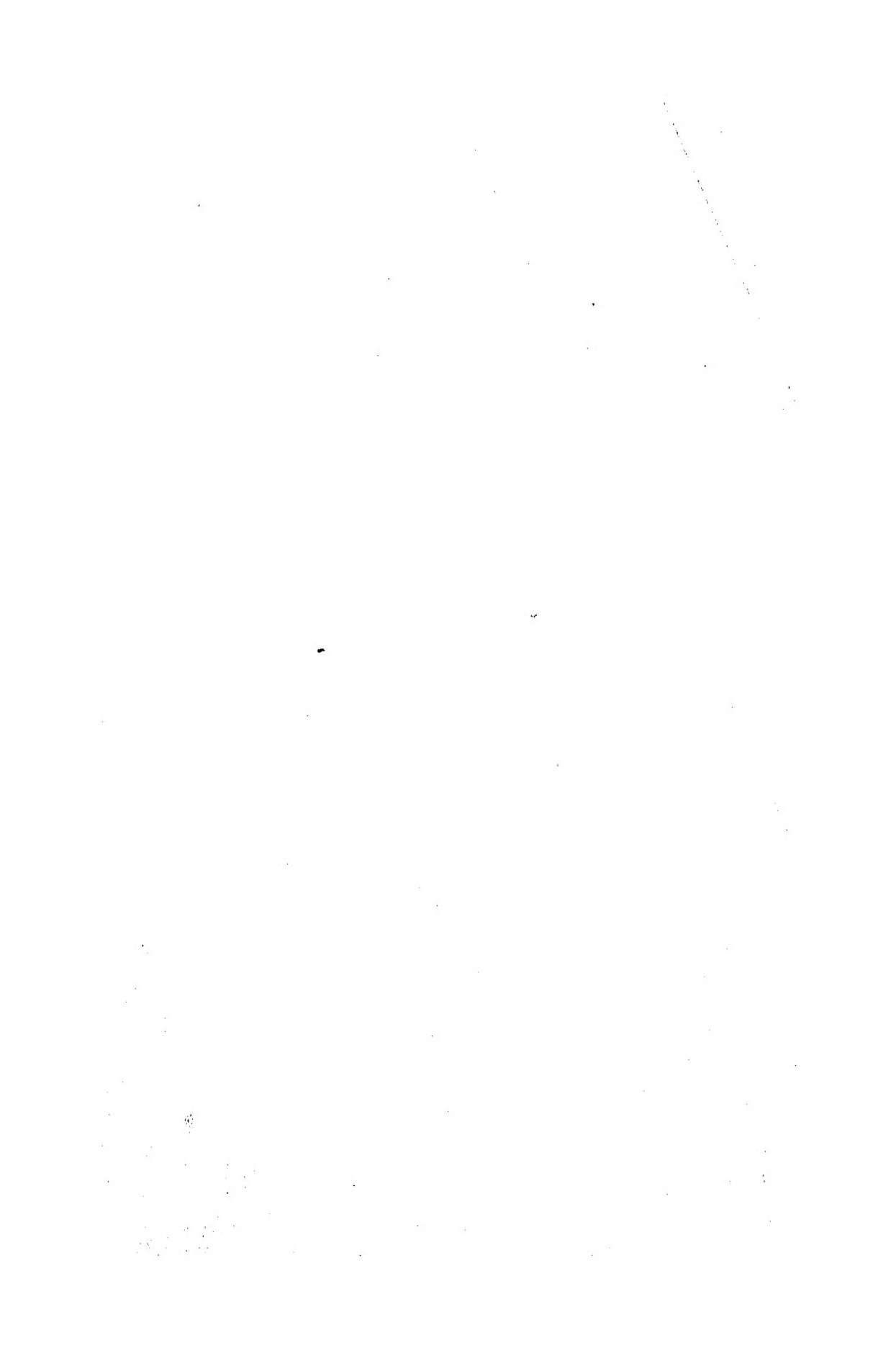
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Original Articles.

THE MEDICAL PROFESSION AND ITS WORK IN INDIA, PAST, PRESENT AND FUTURE.

BEING THE ADDRESS OF SURGEON-COLONEL ROBERT HARVEY, M.D., F.R.C.P., F.O.C., V.H.S., D. S. O.

The President of the First Indian Medical Congress.

YOUR EXCELLENCY, your Honor, my Lords, Ladies and Gentlemen!—The first duty which devolves upon me is the pleasing one of conveying to your Excellency on behalf of the Central Committee, and I may say of every member of this Congress, our hearty thanks to your Excellency for the honor you have done us in presiding on this occasion. We take it, and the world will take it, as a proof that the Government of India is anxious and willing to do what in it lies to favor the objects which this Congress has at heart—objects which have no political significance, but which are of consummate interest to the well-being and prosperity of India. The medical profession, as such, is of no politics, its objects are to battle with disease, to relieve suffering, save life, and promote the health and welfare of the people; ends with which all should sympathise, and towards which all can help. The Congress, by bringing together from all parts of the country all sorts and conditions of medical men and women, European and Indian, official and non-official, civil and military, private practitioners, medical missionaries and others, tends to establish a solidarity of interests and aims which is devoutly to be wished for, and to strengthen the influence of the profession by concentrating it in one broad current. It brings men into close and kindly personal relations, cements old, and lays the foundations of new friendships, enables us to compare experiences, and puts on permanent record much valuable material which is now lost for want of a chronicler. When the idea of a Congress was first started, there was considerable doubt as to whether India was sufficiently advanced to be able to make it a success, and many difficulties were pointed to by cautious men. The Committee and the Secretaries, however, accepting the Napoleonic definition of a difficulty, as something to be overcome, and feeling sure that success was attainable, proceeded to attain it. *Si monumentum queris circumspice.* You have but to look at this meeting to see the monument of their success, and the programme of work to be got through is such that I greatly fear many papers will have to be taken as read. Our total membership is nearly 500. Two hundred and odd papers have been sent in, many of them of the very highest professional and public interests, involving discussions of supreme importance both to the public health and to the public pocket. The success, of which we are now assured, is due in part to the exertions of the Central and Executive Committees, in part to the unwearied exertions of the general Secretaries, in part to the kindness and good-will of the Government in granting facilities for attendance, and to the splendid hospitality of the reverend fathers who have placed this great College at our disposal. It is, however, mainly, and above all, due to the fact that the profession has been true to itself and to its own best traditions. Nothing but

good can come from such a meeting, and I trust that this, the first Indian Medical Congress, may be followed every three or four years by many others to the advantage of the profession and of this country. I have, on the part of the Central Committee, to extend a warm welcome to the delegates who have come to us from other countries. They are all too few, but the exigencies of medical work in the busy season at home has kept many away, and the length and supposed difficulties of the voyage have detained others.

I will now try to indicate in the briefest way what modern medicine has done, is doing, and may hope in the future to do for India. The subject is so vast that it can be given in outline and no more, a mere scene painter's sketch, not a finished picture. By modern medicine I, of course, mean the science introduced from Europe by the earliest medical officers of the Honorable East India Company. From the small beginnings made by them has developed by natural evolution our system of hospitals and dispensaries, sanitation, vaccination, and medical education as they exist to-day, and from which we hope that a further development may take us in time to things unattempted yet.

It is a curious fact that it was in gratitude to a doctor envoy for professional services that the first firman was granted to the Company, by the Emperor Jahangir. In the earlier days of the Company, and, in fact, up to the evil times of 1857, and to some extent even yet, we find medical officers in the most incongruous and unexpected positions and places—Residents and Envoys at foreign Courts—Commissioners and Deputy Commissioners, Superintendents of Gun-powder Factories—Post-masters General, heads of such departments as the Telegraph, Masters of Mints and so on. This, I take, was due in great measure to the fact that in the earlier days both civilians and military officers came out so young that they were beaten in the advantages education gives, by the older and more scientifically trained medical officers. The medical science of that day we should now look upon as very primitive, but it was the best that was to be had, and did yeoman's service to the Company and the people. As the red boundary line of England's influence extended, dispensaries and hospitals sprang up in all the large cities, and brought relief to many, specially surgical relief. The idea of preventive medicine had not yet been born, even in England, so that no sanitary service was attempted. Vaccination was, however, started within two years of its discovery by JENNER, and a beginning was made with medical education. From a very early time, native doctors, as they were then called, were trained at the local dispensaries, beginning as apprentices or even as hospital coolies, picking up what they could at the best side, aided by informal teaching from the Civil Surgeon. The results, strange as it may seem, were sometimes surprisingly good. I have seen lithotomy and cataract operations ideally perfect in technique, finish and result, performed by a man who had never attended a medical school and knew next to nothing of Anatomy. As a rule, however, the results were not satisfactory, and an enormous advance was made, when in 1822 a vernacular medical school was started in Calcutta. Systematic medical education really began, however, with the opening of the

Medical College of Bengal in 1884, followed by that at Madras in 1885, and at Bombay in 1888. In all these the instruction was in English. The Vernacular Medical School in Calcutta was followed by one at Hyderabad founded in 1846, another at Agra in 1855, and one at Lahore in 1880. When I came to India in 1865 these were the only schools.

I tried to get for this address a statistical statement shewing the chief medical and surgical results obtained throughout India in 1865. The first year for which complete statistics are available is, however, 1877. If the progress between 1865 and 1877 was at the same rates as between 1877 and 1893, we should have to halve the figures of 1877 to arrive at those of 1865. In 1877 then 6,142,070 patients were treated in 1147 hospitals and dispensaries; 4,633,105 vaccinations were performed, 2,682 operations for stone and 2,372 for cataract. These were great results and reflect the utmost credit on the officers who attained them; but they were nothing in relation to the population and true needs of the country. Small tentative efforts had been made to introduce sanitary improvements—I am now speaking of 1865—but systematic sanitation, as we know it, had not begun. The Sanitary Department, though its formation was under consideration, had not been constituted, and the death-rate of the European troops had from the beginning of the century reached the appalling annual average of 69 *per mille*. A Royal Commission sitting in 1864 ventured to express a hope that the introduction of scientific sanitation might reduce this to 20 *per mille*, and the creation of the Sanitary Department as a result of their recommendations may be taken as a boundary line dividing the past from the present of medical work in India.

My period of service, now close on 30 years, coincides with this. It has been marked by enormous progress in all directions. Medical colleges, in which a complete education is given in English, have been opened at Lahore, Allahabad, Tanjore, Nellore and affiliated to the Universities. At Hyderabad the classes have been taught in English since 1882. Additional vernacular medical schools for the education of Civil Hospital Assistants and civil medical practitioners are now working at Sealdah, Patna, Dacca, Cuttack, Poona and Ahmedabad.

The medical education of women has also been recently introduced, and girls are now trained for the purposes of the Dufferin Fund at most of the medical schools. The number of hospitals and dispensaries open last year was 2,025, at which were treated 16,973,468 patients, increases of 76 and 176 per cent. over 1877. There were 4,476 operations for stone, 20,279 for cataract. Vaccination has been enormously extended and put on a much more systematic footing, 7,602,024 operations were done, an increase of 63 per cent. These figures indicate great activity and afford ground for congratulation, yet compared with the wants of the country, they still touch but the fringe of the population. In Bengal, for instance, only one-fifteenth of the people are within five miles of a dispensary, and a considerable percentage of the children born escape vaccination, so that bad epidemics of small pox are still possible. Of recent years an entirely new development has taken place in the

organisation of special hospitals for women, offered by medical women, under the fostering care of the noble LADY DUFFERIN, whose name like MILTON's should resound for ages among the zenanas of India. Still in its infancy, it is doing enormous good to a class whose needs are of the sorest, and it is, I believe, destined to flourish and increase till every important town in India has its Dufferin Hospital side by side with its hospital for males.

Sanitary progress, however, is the chief feature of the last 30 years, and more especially of the last decade. I have told you how the death-rate of British soldiers up to 1857 averaged 69 *per mille*, and that the Sanitary Commission ventured to hope it might be reduced to 20. This estimate was too modest, for since 1882 it has never exceeded 15, except in 1889, when it was 15.6, less than a quarter of the previous rate. The reduction has been affected by hygienic reforms of all kinds, but especially by the gradual improvement of the water-supply in cantonments, first by cleaning and protecting wells and tanks and setting them aside for drinking purposes only, a plan which has been followed for many years; and of recent years by scientifically devised water-works provided with all the latest improvements. A glance at the two maps I shew you, will give a better idea than any words can of the great recent advances in this direction. The first representing the India of 1865 is like the Chart of the Shark-hunters "a perfect and absolute blank." The second shews the cities, towns and cantonments now properly supplied, or in course of being supplied with pure water. In those with dotted lines the works are in hand, but not yet in operation. The Cawnpore works are complete in the town, but have not yet been extended to the cantonment. The Murree water scheme supplies Dunga Gali, Kyra Gali, Bawan, Kuldanna, Clifden, Gharial and Thop as well as the Murree Bazar, cantonment and civil station. It cost Rs. 7,20,000. The whole of the troops in the hills near Murree, numbering some 5,000, are thus supplied with pure water. Many additional schemes are under consideration.

It has long been the fashion to poke fun at the Sanitary Department, to denounce it as a sham and a pretence, producing reports which lead to nothing—*Vox et præterea nihil*—and sanitary officers themselves have sometimes felt that much of their labor was of the Sisyphæan sort in the absence of any means to enforce and carry out their recommendations. The map seems to me to point to encouragement instead of despair. Even in England modern sanitation is a thing of the present century—mainly of the last half century—sanity has not been reached and popular ignorance and prejudice and vested interests still block many possible improvements. In India where *stare super vias antiquas*? What was good enough for our fathers is good enough for us, is a sentiment deep rooted in the hearts of the people, and is almost a part of their religion; it is small wonder that the progress has been slow. Still the progress is there, and in India as elsewhere, tends to acquire continually increasing force and volume as it proceeds.

Municipal Acts containing provision *inter alia* for sanitary measures, Village Sanitation Acts specially designed *ad hoc*, have been embodied in our laws, and though

mainly permissive, can be extended by notification to such places as seem sufficiently advanced to accept them.

Sanitary Boards on which a Sanitary Engineer are now established in most provinces. Various schemes are on foot for extension of water-works, drainage and other improvements. The importance of sanitary measures is now much more fully recognised than it was even a few years ago; so are the obligations of Governments to deal with preventable diseases; the latter fact finding practical expression in the greatly-improved arrangements for the regulation of the great religious gatherings at Hardwar and elsewhere, the supervision of pilgrim traffic, and so on. To cynics and pessimists who object that what has been done is as nothing to what remains to do, I can only say with TENNYSON, "Wait, my faith is large in time." Sanitation is in the air, and my successor in this chair 30 years hence will, I venture to think, be able to announce progress still greater than has been made since 1865.

SAM SLICK has warned us not to prophesy unless we know. I will not prophesy, but will now try to indicate a little more fully in what directions progress is likely and desirable, the difficulties in the way, and the means of overcoming them. No one is more thoroughly aware than I how little the great deal that has been done is, compared with what is left to do, and no one can recognise more fully the difficulties in the way of affecting such a general reform as shall satisfy Europe. When asked what India wants from medical and sanitary science, I am tempted to use the words of the ragged urchin in *Punch* who replied to a similar question, "I think I wants most everything." Let me enumerate the needs, first medical, then sanitary. We will take the question as to the means of providing for them later. The first and greatest is like Cerberus three-headed. To bring the advantages of modern medicine within reach of all, we require a great extension of hospitals and dispensaries, officered by a class of locally-trained practitioners of higher professional attainments than the average of those educated at existing schools. This in turn involves improved facilities for teaching, by bringing the schools up to date in method and equipment, raising the educational standards and improving the position of the graduates and licentiates. I have mentioned that only one-fifteenth of the population of Bengal is within a reasonable distance of a dispensary. Other provinces are in advance of Bengal, and the N.-W.-P. do not intend to be content till they have a dispensary within five miles of every one. If the principle is to be generally applied, the personnel of the Medical Department will have to be largely increased, and will even then have to be supplemented by the labors of a vast number of independent practitioners. I consider, however, that till we have an improvement in the standard of medical education, any great immediate increase in the number of dispensaries is not desirable. Itinerant dispensaries, such as have been provided in the Native State of Gondal at the trifling annual cost of Rs. 1,300 each, might be helpful for a time, but are at best a makeshift. As an old teacher and examiner, I think that the medical education already given is as regards the great colleges which teach in English,

marvellously good, and that many of our Native graduates are fit to hold their own with men educated in any land. The results achieved in some instances by the vernacular schools are also surprising, and have greatly improved of recent years. Neither English nor vernacular schools, however, are as efficient as they should be. The Medical College of Calcutta, the parent of all subsequent medical schools, is most miserably and inadequately housed. It has but two poor theatres in which lecture has to succeed lecture without intermission, so that the professors have neither the time nor the opportunity to prepare for their demonstrations, and the rooms are poisoned by the mephitic air of a succession of audiences. There is no room for the professors, not even a lavatory in which to wash their hands. Continuous efforts have been made to keep the teaching equipment in line with modern progress, and with fair success, but the laboratories, dissecting-room, anatomical and other departments are all cramped for space, and so damp and dark and ill-arranged that effective teaching is very difficult. It is far behind the schools in Bombay, Madras, and Lahore, and in some respects even behind the Vernacular School at Agra. Most of the vernacular schools are equipped on a scale so modest that the wonder is they can attain such results as they do, which must be ascribed to the diligence and good-will of both teachers and students. Recommendations have recently been made which, if accepted by Government, will give improved facilities for teaching and will improve also the position and prospects of such of the licentiates as enter the service of Government. Though still capable of improvement, the success in medical education in India has been phenomenal, and for a time the supply of practitioners has almost outrun the demand. Competition is severe and opportunities of attaining distinction limited, since Government naturally appoints its own servants to its own hospitals and teacher-ships. The services are open to all, but admission to the commissioned ranks involves a sojourn in England with a severe competitive examination at the end of it, and the local service, while also limited, has so few real prizes that it is not in great request. An outlet which would meet the natural aspirations of a most deserving class of men is greatly needed, and will, I believe, be found as the number of hospitals increases and the Health Department is strengthened. The bulk of practitioners must, however, still look to private practice, and as education spreads, the demand for their services is constantly increasing. The Government in India does more than any Government in the world to provide medical aid for its subjects, but no Government can give employment to all comers. The local profession, if I may venture to say so, wants a little more self-help and self-reliance. The School of Medicine recently established in Calcutta, independent of Government aid, is a step in the right direction, and when hospitals are built and maintained in India as in England by voluntary contributions, the contributors will naturally elect their own officers. They are empowered to do so under existing regulations, and 129 of the dispensaries of Bengal are at present officered by medical men elected by the committees. The difficulties and limitations of private practitioners have my

warmest sympathy. I have always done and will always do my best to help them, but so long as the great hospitals and medical schools are maintained by Government, it is reasonable that they should be officered by Government servants, and so long as Government continue to get the best men they can by open competition of the severest kind, I fail to see that there is any valid reason for complaints. As SHAKESPEARE says :

The remedies oft in ourselves do lie

Which we ascribe to heaven,

and the remedy here lies in private enterprise uncontrolled by Government ; though in all probability aided and fostered by Government, which is always ready to help those who help themselves. A new hospital is to be built in Calcutta by Government. I have recommended that on certain conditions it shall be governed by trustees and officered by non-officials, but have distinctly said I do not recommend it if the extra cost involved is to fall on the Government. That extra cost should be raised without difficulty if there is any real desire for the new departure. We meet you more than half way, do you for your own selves the rest.

Another need felt greatly by the profession is that of some such Act as the Medical Acts of England, by which properly-educated and duly-qualified men may be distinguished from the hosts of quacks, charlatans and imposters who everywhere abound. It is not to be expected that the State can put down or try to put down quackery, but it would be something to be able to tell regular practitioners from the predatory free lances and if, in addition to a register, some body analogous to the Medical Council of England were appointed, another advantage would be gained, and it would be possible to elevate and improve the condition of the profession by purging it of those members—few and yet still far more common than they ought to be—who disgrace themselves and help to degrade medicine by public advertisements, the issue of obscene catalogues and other objectionable practices.

The elimination of such persons would raise the tone of the whole profession and improve our ethical standards, which are much too low. We want to see less of the trade and more of the scientific element, and while it is no doubt true in spite of TALLYRAND, that a man must live, he must not *proper vitam vivendi perdere causas*, for the sake of life give up all that makes life worth living. Fine phrases as to the dignity of our noble profession, the unity of its interests, the catholicity of its aims are mere pickings from the waste-basket of words in the mouth of a man who will steal his neighbour's patient and blast his good name with a sneer. The too credulous public whom every sophister can blind are mainly to blame for the constant changes of medical attendants so common in India, but if medical men were less ready to humour them, and more "apt to point out the foolishness" of what LUXFORD called swapping horses in mid-stream, it would be good for both patient and practitioner.

Another great and crying need, both for the profession and the public, is the extension to India of those modern discoveries which are so fruitful for good in Europe, and which have such splendid potentialities of future development. It is not creditable that India, whose crowded

millions are as interested as any in the solution of the problems of disease, and the provision of medicine, should be doing nothing to bring about such desirable results. It is not to the credit of England that when the plague breaks out in a Crown Colony, she should be dependent on a country like Japan for a demonstration of the cause of it. It has often been a reproach to Indian medical men that with all their vast opportunities they have done little for pathology. The charge is in the main true, though brilliant exceptions might be mentioned but the explanation is not far to seek. No man can serve two masters, and officers liable to transfer from one end of India to another at the shortest notice, with hospital and private work filling their time and causing constant interruptions, cannot if they would give the close attention which is necessary to successful pathological work. Modern pathology, including bacteriology, demands the whole time of its votaries, and laboratories filled with costly instruments and appliances. There is work in abundance for many observers, but the scheme of the Government Medical Department hardly contemplates such, and here, too, we must look mainly to private enterprise, though Government may well be asked to aid. I have long been pleading for a thorough scientific investigation of Indian fevers. Years ago I recorded my opinion that one or possibly more specific fevers are mixed up together with those recognised in the official nomenclature. The working out of this point is of supreme importance to India, where some 75 per cent. of the recorded deaths are ascribed to fever, but it cannot be done without especial research. Diphtheria is a very fatal and destructive disease. A new mode of treatment, which has already been tried on an extensive scale, promises to reduce the mortality by one-half. Yet this treatment cannot be made available to the people of India until facilities for carrying it out are provided. Persons bitten by rabid animals have to go to Paris for treatment. All these needs will be met, and India take her proper place among those countries which are trying to advance science for the benefit alike of men and animals, when the Pasteur Institute of India is established. That institute we mean to have, and to have mainly as the result of private enterprise. Our success has been so far hampered by the well-meaning efforts of kind-hearted persons who have let their imaginations run away with them. This is not the place to discuss the question of vivisection; I am about to deal with it, elsewhere, and hope to be able to convince all but a few irremediables, that the Institute is entirely justifiable, and that sensitive and humane men may freely subscribe to it, as I again ask them to do. I must be allowed however to protest publicly against baseless charges of abominable cruelty levied against the medical profession as a body. I claim and I believe public opinion will support me that no profession is more full of sympathy for suffering or more prompt and eager to relieve it.

It is these same irremediables or others of a like kidney who, ignoring the alcoholic beam in the eye of England, wish to remove the opium mote from the eye of India regardless of the wishes and interests of her people. It is they too who prevent us from preventing preventible

disease, and thus make themselves individually instrumental in causing the conveyance of a horrible malady to numbers of innocent women and children, and in allowing the admissions from these diseases to rise from 15,006 in 1883 to 32,663 or 466 *per mille* per annum in 1893—figures which represent three regiments permanently in hospital and useless to the taxpayer. It is time that the common sense of mankind should refuse to be dictated to by a minority of imperfectly informed and unscientific persons whose zeal is in inverse ratio to their knowledge.

These then are the chief medical need; I now pass on to the sanitary needs of India, and I may begin by admitting that in spite of all that has been done, Indian sanitation, even in the large towns, is still in its infancy; while in many of the smaller towns it has not yet been born, and in most villages, not so much as thought of in a practical sense. Drainage, conservancy, water-supply, ventilation are all neglected; vaccination submitted to rather than welcomed, suggestions for improvement fall upon deaf ears, and there is neither the motive nor the money to carry them out. The solution of the problem seems hopeless, yet it must be found. The Governments of Europe are calling on India to attack cholera in its home. Practical sanitarians like Miss NIGHTINGALE suggest plans for doing so, exhortations, remonstrations, protests against the Government of India are not wanting, and it is lectured like a forward child for its shortcomings and supposed supineness. I tell you gentlemen as His Excellency the Viceroy has told us to-day, that the Government of India is willing and anxious to do what it can. It recognises, however, as all reflective people must recognise, the enormous difficulties in the way, not financial difficulties only, though these are many and great, but chiefly, and before all, difficulties due to the ignorance, prejudices, callousness and superstitions of the people. No Government, and least of all an alien Government, can ignore these. You can no more make people clean than you can make them moral by acts and regulations, and no laws or regulations are likely to be successful unless the educated opinion of the country is in their favor. People who have once learned the blessings and comforts of cleanliness even those below them. Each step in improved sanitation leads to others, progress widens slowly down from precedent to precedent, converts increase, knowledge spreads, and a sufficient public opinion is at last created to sanction and accept the reform. This process has had to be passed through in England, and has been an uphill task as all sanitarians can testify. In India the conservative habits of the people, the binding force of caste, of use and wont, of family traditions and the example of their fathers, make the work of educating them even harder still, while the general poverty of the country, as measured in coin, makes it very difficult to induce them to consent to measures which must involve fresh taxation. The results of Sanitary work are measured chiefly by vital statistics, but people have to be fairly educated before they can understand what statistics mean, and require the imaginative faculty to realize them when understood. A death-rate reduced from 50 to 20 is accepted with complacency, but even educated people have to think it over before they realize that in India such figures would mean the saving of 8,400,000 lives a year, and some 50,000,000

cases of avoidable illness. There are no such wasteries as sickness and death. Once get people to appreciate this, and they will be more ready to pay for preventive measures. At present they see that the cost is present and immediate, the results remote, uncertain and indirect. "All men think all men mortal but themselves," and the individual sees no reason why he should not live as long as another. In dealing with such opinions and prejudices the Government may well be cautious, but the idea once prevalent in Europe that it was also careless, is now, I hope, well exploded. The authorities know the evils and are willing to apply such remedies as may be possible. Putting aside, however, the difficulties already mentioned, supposing the people educated to the pitch of desiring the improvements which they now deprecate, we are at once brought up by the financial difficulty. Praise is constantly lavished on England on account of what she does for sanitation, and the praise is thoroughly deserved. But England is relatively a small country and enormously rich. India is, on the other hand, one of the largest, most populous and poorest of countries. The standard of comfort as measured in terms of European economics is low, though as the wants are few, it is really higher than it seems. The population of Great Britain and Ireland is under 38, that of India over 222 millions excluding nearly 67 millions in Native States. The revenue of England is in round numbers and excluding local items £91,000,000 in pounds sterling, that of India 64 millions in tens of rupees, and so terribly has that poor coin like Lucifer, fallen from his high estate, that, in spite of equalling or exceeding, as was the case 30 years ago, the pound sterling, ten rupees, is at present exchange only worth 11 shillings. The income of India is thus represented in sterling by £36,000,000. The revenue per head in England works out £2-8, in India three shillings and three pence or in the proportion of fourteen to one. Sanitary works also are probably more expensive in India than in England, for though labor is cheaper and engineering difficulties less, the trained staff is much more expensive, and much of the material has to be imported. It is said that England spends nine millions a year on sanitary works, and though I cannot find any definite authority for the statement, or any precise figures, this is probably an approximation to the truth. The expenditure has, moreover, been going on for years, and the great works already executed represent an enormous capital, the only direct interest of which is the improvement in the public health and consequent decrease of sickness and mortality. In India this capital has yet to be invested, and as her needs are greater, her expenditure should be greater than that of England. Do any of you realize what this means? It means an expenditure of nearly £53,000,000 a year to bring us to the English level—much more than the whole revenue of the country. It is clear, therefore, that even if the people were prepared for it, financial reasons alone make it impossible at present for the Government to deal adequately with general sanitary problems out of the public funds, or to "enforce sanitation," as they are airily requested to do by irresponsible sanitarians ignorant of the magnitude of their demand.

The tendency of opinion in India to look on Government as a sort of celestial Jack-in-the-box, ever ready to

spring to the rescue when affairs go wrong, is a very strong one, but the Government cannot work miracles or make two and two equal to five or three.

The people then are unwilling, the Government unable to provide means for efficient sanitation *per saltum*. Are we then to conclude that the problem is insoluble, a conundrum to be given up, and that we should sit down with folded hands and do nothing? I have many times heard the note of despair, I know that many men consider our efforts to be hopeless, and our views the dreams of visionaries, blind to facts and deaf to the voice of experience. I confess, gentlemen, that I take a more cheerful view than this, and while fully recognising the difficulties I have pointed out, refuse to impale myself on either horn of the dilemma. I hold that it becomes no man to brook despair, that by sitting still in face of a recognised evil instead of contending against it, we make ourselves responsible for it, and that it is only by "pegging away" that progress is possible. Our friends, the Fathers, will tell you that a "counsel of perfection" is the highest ideal of excellence, to be kept in view and striven for, although hardly to be attained by frail mortals. A model India with all the latest sanitary improvements is such an ideal. The man of little faith says, "it is high you cannot attain unto it." We can at least seek after it, and toiling hard against the stream of prejudice and difficulty see distant slopes of a sanitary Eden gleaming in the distance. As GEORGE HERBERT says—

Who aimeth at the sky

Shoots higher far than he that means a tree.

The map on the wall, the facts and figures that I have quoted to you shewing the progress that has been made, are to me full of significance and hope; and I now pass on to indicate the means by which in process of time our sanitary reformation is to be effected. There is much virtue in "the process of time" and if one thing is needful, it is time, you must hasten slowly, remembering that the habits and usages of centuries cannot be changed in a day, but can only be gradually modified by a slow progress of education. That progress is going on. The elements of hygiene are taught in primary schools, and no doubt produce impressions on some youthful minds. If the books which are somewhat dry and technical could be made more interesting, it would be a gain. Societies like the Calcutta Health Society, by tracts and lectures help the spread of knowledge, and I understand that my friend, Mr. HART, whom we are glad to welcome here to-day, has brought out a scheme for establishing branches of the Health Society of England in all important towns. Mockers will say—This is all talk, we want action. I have shown however, that action is impossible unless we carry the people with us, and much palaver is required to bring them on. As one of my counsels of perfection, I see a great hygiene service with a skilled Health Officer in every district, pointing out to a people anxious to follow his advice, their chief sanitary wants, controlling and inspecting vaccination, supervising water supply, conservancy, drainage, checking vital statistics, and regulating under the advice and direction of the Sanitary Commissioner the public health of the district. These multifarious functions are at present supposed to be performed

by the Civil Surgeon, who, in addition to his ordinary medical duties, is also responsible for the whole medico-legal work of the district, for the management as well as medical charge of the jail, and for the inspection of out-lying dispensaries. I know no more hard working and devoted body of men than Civil Surgeons. They accomplish the wonderful feat of serving not two but three or four masters, yet have not attained the accomplishment of SIR BOYLE ROGER'S bird, and cannot be in two places at once. The three main elements of successful sanitary and vaccination work are inspection and inspection and inspection. Without this it sinks into a sham which may make a fine show on paper, but will not bear stress or strain. A Civil Surgeon's inspections, as a rule, consist of a drive along a road to some branch dispensary, and then looking at what vaccinated children can be brought to him. He has no camp equipage permitting him to travel in the interior of his district, and if he had, the Collector would probably, and the Inspector-General of Jails certainly, object to his leaving the station for more than three or four days at a time. The necessity for special Health Officers then is plain. Where are they to come from, and how are they to be paid? I cannot shirk the problem, and must at least suggest some solution of it. The magnitude of the difficulties caused by the enormous size and population of the country have been pointed out, it is in the very magnitude of the population that I see grounds for hope. One anna, a trifle more than three farthings per head of the population paid to a special sanitary fund would produce in round numbers 14 millions of rupees, and would not only supply a Health Officer for every district in India, but would leave a very large balance available for sanitary works. When the people get to see the real value of sanitation, this anna and much more should be easily forthcoming, and the Health Officers themselves would be potent factors in the spread of sanitary enlightenment. The creation of health officerships would afford a career to many of our best graduates. Their pay would be provided by the sanitary fund, contributed by the people interested. Government would, in a general way, control and direct, deciding on questions of priority and so on, but the scheme would be worked mainly on local lines, by an amalgamation of village unions, contributing *pro rata* to a common fund. Self-help would have free scope and self-government be made more possible and real. To me it is a marvel that an educated community should cry to Government for everything as a baby cries to its mother. Sanitary improvements, the building and maintenance of hospitals are not in other countries paid for by Government. I have proved that the Government of India cannot supply them, though it does more for the medical needs of its people than any other Government I know. It is to municipal taxation levied for their individual and collective benefit by the people who pay it that we must mainly look, supported and enhanced by private benevolence. A good deal has already been given in this way, but it has been a mere drop in the ocean that is wanted. I commend the needs of the sick poor to all rich and charitable men, of whom there are many in India. I could dispose of many lakhs to great advantage if they were placed at my disposal. We want ten for a new Medical College alone, and

I am sure His Excellency would be greatly obliged if any one would save him from the difficult task of finding it from the State coffers.

Such, gentlemen, are the sanitary needs of India, the aspirations of her sanitarians. If I have seemed to give to airy nothings a local habitation which has as yet no objective existence, I can only repeat my belief that time will turn them to shape, and that, by slow degrees no doubt, but still advancing, the progress of the last few years will continue and increase. I would ask all the members of this Congress to be of good courage. Everyone of us can do something to promote improvement; and we should never relax our efforts in the fight against darkness and ignorance, and all the suffering which they bring. Beaten we may be for a time, but let us—

Combating because we ought to combat
Rejoicing fight, and still rejoicing fall

Sure that victory will come, if not to us to our successors.

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THE FEVERS OF INDIA.

By SURGN. LIEUT.-COL. ALEXANDER CROMBIE, M.D., I. M. S.

*Being the address of the President of the Section
of Medicine and Pathology of the Indian
Medical Congress.*

GENTLEMEN,—While I acknowledge the great compliment which was paid to me by my nomination to the distinguished position of President of the important section of Medicine and Pathology at this the first Medical Congress held in this country, I trust you will accept, not as merely formal and customary, but as genuine and heartfelt, my expression of regret that some one has not been selected who might have filled the place I now occupy with more learning, grace and ability, than I can hope to bring to your service. In order to minimise as far as in me lies the disqualifications under which I take my place here, I have selected for my presidential address a subject which has an instant and perennial and daily interest for all of us who practise medicine in India, and one to which I have given much thought throughout my whole service, and the importance of which no one will be disposed to dispute. It is now nearly twenty years since I was requested, among other officers serving in Burma at that time, to report on the fevers of that country, and from that time, till now, my mind has never been long unoccupied with the great, important and complex problem which Indian fevers present. To the European living in Europe, on account of the almost theatrical rapidity of its course, its high rate of mortality, and the mysterious way in which it seems periodically to escape from the limits of the endemic area, and carry devastation westwards in a progress which neither rivers, nor seas, nor quarantine are able to stop, cholera looms large in the catalogue of Indian diseases. But we who live and practice in India know that in many parts, cholera, as in Europe, is only an occasional visitor, and that even in the endemic areas, where though it has its seasons, it is never wholly absent, and while it demands its victims in hundreds, fever exacts

them in thousands. The number of deaths due to cholera in the whole of India in 1892 was recorded roughly as 750,000, whereas the number of deaths attributed to fevers was, also roughly, 4,500,000. Now if we remember that the death-rate in fevers is probably highly estimated if we place it at two per cent., while the death-rate in cholera is not much below 50 per cent. of the cases, we at once perceive what an enormous amount of sickness, suffering, and disability is comprehended in the words Indian fevers, and what an enormous amount of clinical material there is presented to us yearly for their study. The above figures, worked out, give us somewhere about 200,000,000 cases of fever per annum against 1,500,000 cases of cholera. The pre-eminent importance of fevers in the daily life of an Indian practitioner can, therefore, hardly be disputed, and I need I think make no excuse for selecting them as the subject of my address.

The fevers of India divide themselves into two great classes or groups:—In the first of these are those fevers whose course is interrupted by more or less perfect periods of apyrexia, and are, roughly speaking, amenable to treatment by quinine. These are the malarial fevers, and in the second group are the continued fevers, in which quinine is of no avail. With regard to the first, our knowledge is precise and almost complete; with regard to the second it is still hazy and to a large extent conjectural, and yet it is in this second group that are found the fevers, the fatal character of which, goes so far to swell the death-rate of India to its huge proportions.

I will speak first of the fevers in which periodicity is the distinguishing character, namely, the malarial fevers. It is customary to sub-divide these into intermittent and remittent fevers. With regard to *intermittent* fevers we are all of one mind, and there is no question, and can be no question, as to their position, but of late years there has arisen a good deal of doubt, first, as to whether there is any fever which can be called remittent, and if so, whether it should be included among malarial fevers. I confess to placing myself among the sceptics for reasons which will presently appear.

Beginning then with those fevers which in their normal or typical manifestations have distinct periods of perfect apyrexia, namely, the intermittent fevers, I would point out in the first place that they do not in India follow the same order of frequency as they do in other countries. In those parts of India in which I have had opportunities of observation, *quotidian* ague takes the first place in order of frequency. At most seasons I would not probably be wrong in saying that 90 per cent. of the cases of ague we have to treat have daily paroxysms of fever and not more than 10 per cent. are *tertian* in type, while *quartan* ague is so rare that it may be practically left out of account. I have only had to treat one case of quartan ague in the whole of my twenty-two years' service in India, though I heard of another case a few weeks ago, but was unable to see it. In other malarial countries the order of frequency is quite different. In the Roman Campagna, for instance, the majority of the cases are *tertian*, then come *quartan*, and last of all the *quotidian* ague. To this fact, the comparative infrequency of *tertian* and *quartan* ague, I attribute the reluctance which is still shown in some

quarters in India to accept the amoeba of LAVERAN as the true pathological cause of the symptoms of malarial fever, because in quotidian ague, the amoeba is often difficult to find, for the reason of its small size, its often indistinct form, and because it does not go through all the phases of its cyclical life in the blood of the general circulation. In tertian, and specially in quartan ague it is of large size, well pigmented, and generally requires no great research to find it, and in quartan ague its whole life history can be followed in blood taken at intervals from the finger. To study the most critical part of the cyclical life of the parasite in tertian and quotidian ague, namely, the periods of segmentation and sporulation, blood must be taken from the internal organs. From these remarks you will guess, and I may as well at once confess, that I am a convert to the amebic theory of malarial fever. It seems to me that it is impossible to offer any longer a reasonable resistance to this theory. Malarial fever is found to exist in widely different parts of the world, in America, Africa, Asia, and Europe, and in localities differing from each other in every particular of climate. Yet under all these varying conditions the phenomena of malarial fever are identical, and point to an identical pathological cause. In all these places, an examination of the blood of patients exhibiting these symptoms discloses the presence of a living organism which is the same in each place, the same in Africa and America as in Bombay and Calcutta; furthermore, the cyclical growth and development of the parasite is found to correspond with the cyclical periodicity of the fever, the apyrexia corresponding with the appearance of the young amoebae in the corpuscles and the accession of fever with their sporulation and the discharge of their presumed toxin into the blood. If it is to LAVERAN we owe the discovery of the relation of the amoeba to malarial fever, it is to Italian physicians, and especially to GOLGI, MARCHIAFAVA and BIGNAMI, that we owe the working out of its life history, and it seems to me impossible to resist their conclusions.

GOLGI has made quartan ague his special study, and the case with which the life of the amoeba of that form of ague can be studied in the blood of the finger, makes it very enticing. Its cycle of life is shortly as follows, and I am glad to have this opportunity of saying that I was able, even with my very imperfect observations, here in Calcutta, to confirm those of GOLGI and MARCHIAFAVA, as far as I could do so in the single case of quartan ague, which came under my observation last year. In the first day of the apyrexia the amoeba will be found, perhaps, two or even three in a single field of the microscope as in my case, occupying about $\frac{1}{4}$ or $\frac{1}{2}$ of the invaded red blood corpuscles and exhibiting active amebic movements. On the second day of apyrexia, it will be found that it has grown so as to occupy half of the blood corpuscle, to have become pigmented at the periphery and to have all but lost its motility. On the third day of apyrexia it will be found to occupy nearly the whole of the corpuscle, and that the pigment has collected towards the centre preparatory to segmentation. The next and last stage of the cycle of life is that of sporulation, and with the discharge of the spores, and of the toxin which the amoeba is supposed to form, comes the sudden accession

of fever on the fourth day. When this happens over and over again, the same relationship being repeated between the growth and maturation of the amoeba and the periods of apyrexia and pyrexia in the patient, it becomes irresistibly borne in on one that they bear an intimate and indeed casual relationship to each other.

The study is more difficult in tertian, and most difficult in quotidian ague, because the amoebae of these forms of ague cannot always be found in the blood of the finger, retiring as they do to the spleen, brain, and bone marrow to undergo their final stages of segmentation and sporulation prior to a renewed accession of fever, and indeed it is sometimes only on *post mortem* examination that the important part they have played in the phenomena can be understood, the number of amoebae in the general circulation not being always proportionate to the severity of the symptoms. All that is wanted to satisfy the most exacting demand for complete evidence that the amoeba of LAVERAN is the very cause of intermittent fever is, that it should be cultivated outside the body in some suitable medium, and that when a pure culture so obtained is injected into the body of an animal susceptible to the disease, it should give rise to the symptoms and pathological changes of intermittent fever. Hitherto the amoebae of malarial fever have baffled every attempt of this kind if it be not true as was reported a few months ago that CELLI of Rome has succeeded in growing them in some alkaline medium.

It would require a much more prolonged and continuous study than it has been in my power to give to this subject, before I could say or ask you to believe, with MARCHIAFAVA, that each form of malarial fever has its own variety of the parasite, and that you can tell, by its microscopic characters which variety is present and that the specimen of blood is taken from the finger of a patient suffering from quotidian, tertian or quartan ague as the case may be; but it is my firm belief that there is little difficulty in doing so, and my own observations here in Calcutta, as far as they go, go entirely to confirm the observations of the great Italian observers as may be gathered from the phrases I have used in speaking of the parasites of the different forms of intermittent fever, as if they were distinct. I have now seen every form of the amoeba, both the endoglobular and the ectoglobular bodies belonging to the semilunar group with the exception of the flagellate forms in patients in the General Hospital in Calcutta, and they exactly correspond with what I saw in Rome, and is described and pictured in MARCHIAFAVA and BIGNAMI'S book; not only so, but the variety described as that of quartan ague was found existing alone in my case of quartan ague I have alluded to. Here the commonest variety is the annular form found in our cases of quotidian ague exactly like that found in cases of quotidian ague from the Roman Campagna, and the same correspondence will be found also, I believe, in the tertian ague of the two countries.

I now pass to those cases of malarial fever in which there is no distinct intermission. These form an important proportion of the cases of fever treated under the name of remittent fever, and allow me to say, at once that we all recognise two kinds of remittent fever, a malarial

and a non-malarial, which latter I however regarded as a continued fever; and will consider later as one of the group of continued fevers. But at a certain season of the year, that is from the middle of September to the end of December in Lower Bengal at least, a very large percentage of cases of remittent fever partake of a different character, that is to say, they are clearly of a malarial nature, and are equally with the varieties of intermittent fever mentioned before, amenable to treatment with quinine. There is little room for doubt that this group of fevers the malarial remittents as also produced by the same amoeba forms, as produce the intermittent fevers, and that they are in fact intermittent fevers in which either the pyrexial stage is unduly prolonged, owing to the excessive toxic qualities of the organism, so that a new accession of fever comes on before the previous attack has entirely subsided, giving time only for a small remission of the pyrexia previous to the next accession, or they are cases in which there are at one and the same time two sets of organisms in the blood whose cycles of life are parallel, but not synchronous, one maturing, sporulating, and discharging its toxin some eight, ten or twelve hours after the other, and thus keeping up a continuous condition of pyrexia. Just as there is a double tertian, so there may be, and in certain of the cases I refer to there is a double quotidian producing the phenomena, which constitute what is described as malarial remittent fever. I have not made a sufficient number of observations to verify those of MANCHIAFAVA who has found corroboration of this theory of malarial remittent fever in the existence of amoebæ in different stages of cyclical growth in the same drop of blood, but I have found the annular forms of the amoeba present in cases of remittent fever in no way to be distinguished from those so constantly found in the quotidian form of intermittent. I confess, however, that these are most trying cases to investigate microscopically, at least in the time usually at my disposal for these purposes; and I have in most cases been obliged to form my diagnosis on general clinical symptoms.

We must, therefore, in many cases fall back on general symptoms in differentiating the malarial from the non-malarial form of remittent fever, and the clinical features on which we must depend to justify the diagnosis of an element essentially malarial in these cases are the following:—(a) the history of a distinctly intermittent character of the symptoms at an earlier stage before they become remittent in type,—(b) the existence of a more or less distinct remission of the pyrexia at a fairly regular time of the day or night or (c) the occurrence of two remissions, however slight, and two exacerbations in each period of twenty-four hours suggesting the existence of two sets of organisms maturing separately. Observations of this nature require the most intelligent care and record, but when one or other or all of these phenomena are present you know that you are dealing with a case of malarial poisoning, and you must exhibit the antidote even though no malarial organisms can be found in the blood of the finger.

One more word before I pass to the consideration of the group of continued fevers. It may be asked, what practi-

cal good is obtained by the discovery of the malarial parasite in the blood. The clinical phenomena are already sufficiently clear to enable us in nine cases out of ten to dispense with the microscope in forming our diagnosis. This is no doubt true, but not to mention the aid to prognosis afforded by the number of parasites present and their effect on the red corpuscles which they have invaded, there are cases in which the diagnosis is not quite easy, and in which the discovery of the parasite would free the mind of the physician from doubt and perhaps anxiety, and enable him to use the antidote with a freedom and confidence which he could not otherwise feel. Thus in my own practice last year I had a case of urinary infiltration which, while apparently doing well, was suddenly seized with rigors and a rapid rise of temperature followed by profuse sweating, symptoms which under the circumstances were uncomfortably suggestive of pyæmia. An examination of the blood shewed the presence of the amoeba of tertian ague, and led to the administration of a few full doses of quinine, and the cessation of all the symptoms. I venture to think that without the microscope the treatment would not have been so assured or so prompt and effective. In the puerperal state similar assistance would often be of the greatest comfort to us. It is only fair in me to say, however, that in many cases the observer must be prepared for disappointment. The examination must often be prolonged and repeated, and there are various fallacies lying in wait for the inexperienced and in certain instances where the general symptoms, and the prompt response to the action of quinine leave no ground for doubt as to the malarial character of the case; the most patient search sometimes fails to find any organism in the blood of the finger. In such cases the blood of the spleen would probably yield them abundantly. While, therefore, the presence of the malarial parasite in the blood of the finger may be regarded as conclusive of the malarial nature of the case, failure to find it can in no way justify the opposite conclusion in the face of distinct clinical symptoms of a malarial type.

And here pardon me one moment, that I may speak of the efficient use of quinine. There are many practitioners in this country who from timidity or wrong teaching or some other cause, have no knowledge of, and I fear also no belief in, the power of quinine as an antidote for malarial poisoning. How, when or where, the practice originated I cannot discover, but the belief is widespread, among professional men, as well as among the laity, that quinine cannot be safely or efficiently administered except during the period of apyrexia or at least in remittent fever its administration must be delayed till a remission has occurred, such as to bring the temperature down to some point below 100° Fah. All the best authorities advocate a very opposite plan of treatment, and I am glad to have this public opportunity of recording an emphatic dissent from the popular belief and practice. Careful observations have shown that quinine is most efficient against the malarial organism in the early period of its growth, while it is still unpigmented or only collecting pigment at its periphery, i.e., in quotidian ague during the pyrexia and the crisis. When the amoeba ceases to grow and begins to prepare for segmentation and sporulation that is, just before the rigor and new accession of fever, quinine has little or no effect on it, and I entirely agree with MANCHIA-

FAVA and BIGXAMI, that in malarial remittent, where there may be, and frequently are, two sets of organisms maturing separately and severally, at different times, in the blood, the treatment with quinine should be begun without delay and continued at regular intervals without any regard to the state of the temperature curve. My own practice is to give ten or fifteen grains by the mouth, every four or six hours, according to the severity of the symptoms.

I have never given more than 90 grains in 24 hours, and I usually find one drachm in 25 hours serves my purpose, but in the hospitals of Rome, where they encounter a type of fever of a severity such as we rarely meet with here, and which may prove fatal by coma in 48 hours, physicians administer much larger doses. Their initial dose is seldom less than thirty grains, in two doses, at an interval of two or four hours, and pernicious cases they give hypodermic injections of 30 to 45 grains, followed by smaller doses of 15 grains.

If when the time of my leaving India comes I were to leave a message to my professional brethren here, it would be this,—treat your cases of malarial remittent with quinine, early in full doses with a free and fearless hand and regardless of the temperature.

Gentlemen, I yield to no one in my advocacy of the freest use of quinine in malaria, but at the same time I deprecate and deplore that indiscriminate use of it in unsuitable cases, which has brought this invaluable drug into so great disrepute among the natives of this country, and has given rise to a dread of it, both on the part of patient and practitioner, which effectually prevents its effective employment in cases where it is the only hope of salvation. In this instance, as in every other, a careful diagnosis is essential. If after a painstaking enquiry the case appears to be one of the second group of which I am about to speak, the group of continued fevers, withhold quinine or give it sparingly and tentatively, but if you come to the conclusion that the case is malarial, you cannot give it too freely or fearlessly or with too lavish a hand.

I now come to the second group of fevers, our knowledge of which with perhaps one exception is unfortunately still vague and conjectural, and in which quinine is not only of no avail, but is sometimes distinctly harmful. I refer to the continued fevers of which I recognise with certainty three, and probably five as specifically distinct. The three whose differentiation I regard as indisputable are *simple continued fever*, *typhoid fever*, and *non-malarial remittent*, so called,—the other two whose title to a distinctive name you may be disposed to doubt are a fever especially of towns known locally as "*Calcutta fever*," "*Bombay fever*," etc., which runs a course very similar to that of typhoid fever without any of the symptoms of that disease, and lastly there is a low continued elevation of temperature of indefinite duration and without any distinctive symptomatic features, and known simply as "*low fever*."

I do not propose to allude to ephemeral fever, of 24 hours duration and due to chill or slight exposure to the sun, or to that extremely sudden severe and fatal form of fever called *insolation* or *sun-stroke*, or the cerebro-spinal or typhus fevers, but I would venture to remark that whatever the returns of the armies, both European and Native and of civil hospitals and jails, may seem to say to the contrary,

the most common fever of India is not *ague*. The fact that "*ague*" takes the first place in the returns is merely due to a looseness of nomenclature which leads medical officers, at the instance generally of their subordinates to return as "*ague*" every case of fever of short duration, as well as those which show the intermittent character which entitles them to that name. I was a very short time in India before I began a fight on this subject—a battle which continues even unto this day. To my mind no fever is entitled to be called *ague* which does not conform to a certain type, that is to say, unless its course is interrupted by intervals or more or less complete apyrexia.

Now in the parts of India where my lines have fallen a type of fever with this essential character has at no time or place been the prevailing one as the returns referred to would lead one to suppose, and if you were to refuse to accept as *ague* all cases of fever except those in which intermission was an essential feature, you would sweep away at once some three-fourths of the cases now returned under that name. In certain months of the year, that is to say in October, November, and December, true *agues* are more frequent than at other seasons, but even then they by no means constitute the majority of the cases, and for nine months of the year it is often difficult even in a large hospital to find a case of genuine *ague* for weeks at a time.

The cases which are thus wrongly returned under the heading of "*ague*" are really cases of "*simple continued fever*," a fever often ushered in with a rigor, a very high temperature and evidence of great gastric disturbance. I have known the temperature reach 106° Fah, within a few hours of the commencement of the symptoms, but more usually the ingress is more gradual, though the headache and gastric symptoms are generally very distressing. The duration of the case is generally from three to eight days, and there is often much doubt whether it will or will not pass into typhoid when the patient is a European, and especially if he is living in a drained town.

Such cases are examples of a distinct type of fever which has been recognised and described by all the best authorities under the name of simple continued fever, a name to which there is no objection. But instead of determining within a week it is not very unusual, especially during the cold season, and early summer for these cases to continue for a longer time, and then we look for deferrescence about the 14th, 21st or 28th day. These cases are particularly common in towns and are known as "*Calcutta fever*" "*Bombay fever*," etc. It is open to any one to assert that these are cases of mild typhoid fever, and that those which recover early are merely abortive cases of that disease. It is, however, I think impossible for one accustomed to treat considerable numbers of cases of true typhoid fever, and who also has opportunities of watching the imperceptible gradation of cases of simple continued fever into the cases now under consideration, not to notice distinct differences which forbid him to concede more than that certain mild and abortive cases of typhoid may be mistaken for cases of the continued fever of our towns. I am one of those who are unable to admit that the whole philosophy of continued fever in India can be epitomised in the word typhoid. I cannot admit that the bacillus of ESCHERICH is the only organism capable

of giving rise to a febrile curve of three or four weeks' duration. As a matter of fact, it is known and has been experimentally proved in animals that a bacillus normally present in large number in the human intestine, the bacillus coli communis, is capable under certain conditions of becoming virulent and then endowed with a power of producing a fever and even pathological appearances, including ulceration of the bowel, hardly to be distinguished from those of typhoid fever. It has always, therefore, seemed to me to be narrow and unjustifiable to classify as necessarily typhoid every case of continued fever of three or four weeks' duration. If the bacillus coli communis is sometimes endowed with this power, why not also some other organism or organisms as yet unknown? With the knowledge of this possibility before my eyes, I have been accustomed to insist on the presence of certain symptoms resembling those of typhoid fever before being prepared to concede that any given case of continued fever is one of that disease. Now such symptoms in the cases I refer to are conspicuous by their absence. It is true that genuine cases of typhoid fever, often in this country, present remarkable variations from what may be considered as typical of the disease described in text-books. I need only allude to the frequent absence of that gradual step like rise of temperature during the first three or four days which is so characteristic of typhoid fever in Europe. Instead of that we quite frequently, and I believe it to be the rule here, have a sudden rise to 104° on the first and subsequent days. I need not mention the alleged more frequent absence of the characteristic eruption here, because I do not think it is more often absent here than in Europe, and even if it were it is not so much the absence of spots which constitutes our difficulty of diagnosing typhoid in India, but rather the superabundance of spots, at least in the hot weather and rains, when the whole body is covered with prickly heat, in the exuberance of which it is as hopeless to pick out typhoid spots as to find the proverbial needle in a bundle of hay. Neither do I speak of the difficulty of seeing the spots on pigmented skins, because as I have pointed out elsewhere, the native races of India exhibit a marked immunity from typhoid fever, with the exception of the lighter coloured races, the Gurkhas and Burmans, and perhaps other meat-eating and drink-drinking people. Neither do I speak of the relative frequency of constipation in typhoid fever in India, because I do not think it is more common than in Europe; and because I believe that the constipated motion of a genuine case of typhoid with its appearance of orpiment paint is as characteristic of the disease as is the pea-soup stools of typhoid diarrhoea. But what I maintain is that we are not justified in designating as typhoid fever cases which have neither the gradual initial rise nor the eruption, nor the characteristic stools, whether loose and like pea soup, or constipated and like yellow coach paint, cases in which the tongue continues clean and moist or simply coated as in any febrile condition, and in which the mind is clear throughout unless you give quinine. I say we are not justified in calling such cases, in which all the symptoms of typhoid fever are absent, enteric fever, simply because they have a duration of three or four weeks. I

demand that some one or more of the ordinary symptoms of typhoid fever should also be present. Neither will I admit that even hæmorrhage from the bowel necessarily removes them to that category if it be true that other febrile infections besides that of typhoid may also give rise to intestinal ulceration. I believe that these cases, which I am now describing, and which are so sharply differentiated from typhoid fever by the whole clinical picture which they present constitute a specific disease, and must have a specific and separate cause distinct from the bacillus of ENTERIC.

A very few words will suffice to dispose of the next form of continued fever. It is one which is only occasionally met with among Europeans, and I do not think I have met with it in natives in India, but if it does occur among them it would hardly be brought under my notice. I refer to a persistent low elevation of temperature unaccompanied by any constant symptoms, of indefinite duration, and uninfluenced either by quinine or arsenic. The temperature never falls below 99° and rarely rises above 101.5. It may continue for several weeks without complication except, perhaps, a tendency to diarrhoea of a bilious character, with loss of appetite, and gradual loss of strength and flesh. Some of these cases are distinctly aggravated by quinine, and I have known them cease abruptly on withdrawing the drug which had been persistently given in the belief that the condition was malarial in its essential nature. These cases are spoken of as "*low fever*" and are generally cured by a "change" of any kind, but especially by a trip to sea, and it is especially this form of fever which in Calcutta is benefited by a visit to the Sandheads. Though very ill-defined, these cases constitute a distinct type of fever at once recognised when met with.

Widely different from this "*low fever*" is the last form of continued fever of which I have to speak, namely, the *non-malarial remittent* (so-called). It is a pity we have no better name for this fever, which is of very frequent occurrence, and is one of the most fatal of our fevers. The designation "*remittent*" is a misnomer. It is no more remittent, and indeed often less so than typhoid. The temperature is generally very high, touching 104° and 105° for a long part of its course, and the daily fluctuation not exceeding 2° or 2.5°. It begins in a way not unlike the cases I have described under the name of "*Calcutta fever*," "*Bombay fever*," etc., and is by some considered to be a variety of typhoid fever, not withstanding its divergence from all the symptoms of that disease. Hepatic enlargement and congestion are early and constant conditions; but the spleen, as a rule, continues impalpable below the ribs. Bilious diarrhoea, in no respect resembling the diarrhoea of typhoid, is also a very frequent symptom,—quinine often given in large and repeated doses in these cases is not only not useful but so obviously adds to the distress of the patient without in any way producing an improvement in the progress of the symptoms that it is very soon abandoned. Meanwhile the temperature continuing persistently high marked head-symptoms, especially delirium of a muttering and irritable kind, comes on, and the patient may even and often does pass into a condition of coma from which he can hardly be roused. This condition, one of persistent high temperature without any

marked remission, a distinctly enlarged and congested liver with bilious diarrhoea, congestion of the back of both lungs, and a low muttering delirium is generally reached by the 10th to the 24th day. If coma supervenes, the patient frequently dies about this period. In more favorable cases where the symptoms are less severe they continue for a week or two more, and the average duration of the case is six weeks. None of our drugs seem to be of any use in shortening it, certainly not quinine, the inadequacy of which in these cases has now become fully recognised, though the disease has not yet found a name or place in our nomenclature.

Though I have seen this fever in Europeans, it is essentially a disease of Natives, and is not common after thirty years of age, though frequent enough in childhood. Like every other continued fever in India, this also has been called typhoid fever, though it is difficult to conceive a condition more distinct from it in its symptoms or course. This is the fever which offers the highest promise to the enquirer of the near future. It is obviously not a malarial fever, and no unprejudiced observer would for a moment class it with typhoid, and yet it has such a perfect and constant clinical course that it must have a special and specific cause, some organism which is waiting its discoverer. Such a discovery has at last been made with regard to "Malta Fever," a fever long and persistently considered to be typhoid, but now proved by the researches and experiments of BRUCE, GIPPS, and HUGHES of the Army Medical Department to be as distinct clinically, pathologically, and bacteriologically from typhoid fever on the one hand as it is from malarial fever on the other. It has been my fortune to watch some twenty cases of Malta fever in the General Hospital, and it is difficult to understand how it could ever have been regarded as related, even to typhoid fever, so different is it in its clinical character alone. The gentlemen I have named have succeeded in isolating the organism which is its essential cause, and have been able in six instances to induce an analogous fever in monkeys by means of pure cultivations of the "micrococcus melitensis" as it is called. Malta fever has no congener in India, but should not the success of BRUCE, GIPPS and HUGHES stir us up to a scientific investigation of our Indian continued fevers? These investigations are not really difficult. Their essential requisites are a few simple stains and a patient looking through the tube of a microscope. We have allowed a Frenchman to find in this way for us the amoebae of our malarial fevers and a German the comma-bacillus of cholera, which is surely our own disease. Shall we wait till some one comes to discover for us the secrets of the continued fevers which are our daily study, or shall we be up, and do it for ourselves? It may be that I have wearied you with my address, the subject of which is necessarily one of technical detail. It may be that you differ from me entirely in my opinion as to the nature of the fever which I have now attempted however feebly and imperfectly to differentiate and classify, but if I have succeeded in rousing any of my hearers or any of those who may do me the honor of reading my remarks to a more careful clinical study of the cases which come

daily under our observation in this enormous field for clinical study, in which we work, and there must be many better qualified for the task than I am; and especially if I can hope to rouse in those who have more leisure than I, the determination to study these fevers bacteriologically and to make a precise knowledge of their true nature our own, I shall be content and think that I have perhaps not written and spoken in vain.

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THE INFLUENCE OF PERCIVAL POTT, SYME, SIMPSON AND LISTER ON MODERN SURGERY.

By SURGN. LIEUT.-COL. EDWARD LAWRIE, M.B., M.R.C.S.

*Being the Address of the President of the Section of
Surgery of the Indian Medical Congress.*

GENTLEMEN,—I feel the distinction of being selected to fill the important post of President of the Surgical Section of the Congress as the very highest honor that could have been conferred upon me. At the same time I may say without affectation, that I am almost overpowered by the sense of my unfitness to fill that position, and fear lest I may disappoint many of you in the remarks I am about to make.

In surgery I am strongly *conservative*, and there are many men in our service in India who have far higher claims to be considered scientific surgeons, and who would have done far greater justice to the developments of modern surgery than I can do.

On the other hand, I am convinced that the experience you will bring to bear upon the many important surgical questions which will come before the Congress will have lasting consequences in the future, and will much more than atone for the shortcomings on my own part to which I have referred.

The only thing I can say in my own favor is that I am a staunch admirer of British surgery, and especially of British surgery in India. I find it impossible to overestimate the value of what I learnt in general surgery, and also about chloroform, from PARTRIDGE, who was the Professor of Surgery in the Medical College here when I first came to India.

I have never seen more perfect operations for dataract than those of J. B. SCRIVEN, of Lahore, nor sounder and more brilliant abdominal operations—not even excepting those of KNOWSLEY THORNTON—than those of BRANFOT of Madras. Further, I venture to assert that the Surgery which has been done in the North-West of India during the last 20 years by FREYER, SANDERS, KERRAN, GEOFFREY HALL, WILLCOCKS, PERRY, the NAYES in Cashmere, and a host of others, as well as by the men they have taught, has done and is doing more to establish kindly and friendly relations between the natives of England and the natives of India, than any of the numerous beneficent enterprises which have been fostered by Government for the benefit of the people and the country since India became part of the empire of the Queen. Finally, I may relax, with I hope, pardonable pride, and which I trust will be shared by the Government of His Highness the Nizam, a piece of surgery which has just been done by one of my own pupils.

This youth, till lately an Assistant House-Surgeon at the Hyderabad Head-Quarters Hospital, performed a Listerian ovariotomy successfully, at a lonely out-station in the district, with no other assistance than that of a compounder and two coolies. One of the coolies gave chloroform, the other looked after the instruments, sponges, lotions, dressings, and the friggerator; and the compounder acted as first and second assistant combined.

Gentlemen,—I have thought long and anxiously over the problem of the best way of occupying the time at my disposal for the delivery of the formal address on surgery before this the first Indian Medical Congress. The conclusion I came to was that we cannot do better than consider the influence of four great British surgeons on Modern Surgery,—PERCIVAL POTT, SYME, SIMPSON and LISTER. I have chosen these names from among the numerous great names there are to select from, for many reasons, one being that they are the four whose lives, writings, and example I know best: and further because they are Englishmen, and no other country that I know of has produced four men who have accomplished so much as they have for surgery. PERCIVAL POTT represents the surgery of the latter half of the eighteenth century. He resigned the office of Surgeon to St. Bartholomew's Hospital in 1787. SYME and SIMPSON resigned their posts of professors of Clinical Surgery and of Midwifery respectively in the University of Edinburgh nearly a hundred years later. POTT and SYME both served their schools, as POTT used to say of himself, "man and boy" half a century. In one of his well-known tracts POTT says:—"Our fathers thought themselves a great deal nearer perfection than we have found them to be; and I am much mistaken if our successors do not, in more ways than one, wonder both at our inattention and our ignorance." We must admire POTT's modesty; but when we think of the work accomplished by him, by SYME and by SIMPSON, we cannot help wondering at their genius, their skill, and at the imperishable principles of surgery they have handed down to us and to our successors. The last of the four, SIR JOSEPH LISTER, is still with us, and we all know that his work constitutes the subject we are about to consider chiefly to-day, namely Modern Surgery.

Up to the time of POTT the state of surgery was imperfect. Operations were unnecessarily painful. The maxim, "*dolor medicina doloris*," was accepted as fully demonstrated. Dressings were painful, the actual cautery was prepared as a part of the necessary apparatus when the surgeon paid his daily visit to the hospital; and the natural processes of healing were either not recognised or disregarded. POTT's biographer states that he lived to see these remains of barbarism set aside, and a more rational plan, of which he was the chief author, universally adopted. POTT did not commence to write until the year 1756, when he was over forty years of age, and had acquired a vast amount of experience in surgery. Between that time and the year 1787 his writings were numerous, and many surgical conditions which he was the first to describe, such as fracture of the fibula with dislocation of the foot, and angular curvature of the spine, will always be known by his name. He wrote what he called

"tracts" on many diseases in surgery, and not only accurately described them for the first time, but also laid down principles for their treatment which hold good to the present day. There is unfortunately not time to do more than enumerate the subjects on which he wrote, and is still an authority, such for example as curvature of the spine, hernia, polypus of the nose, cataract, hydrocele, injuries of the head, fractures and dislocations, compound fracture, diseases of the rectum, chimney sweep's cancer, aneurism, gangrene, amputation, and so forth. POTT was singularly successful with the trephine, and his essay on injuries of the head is well worth careful study in connection with recent advances in brain surgery, for which we are so much indebted to the splendid work of FESSLEMAN and VICTOR HORSLEY. POTT discovered that when the bone inflames after a blow on the head, and a puffy inflammatory swelling makes its appearance in the scalp covering it, this generally indicates suppuration exactly opposite the same spot, on the inside of the cranium, which may be relieved by laying on the trephine. POTT published a most interesting and remarkable series of cases of head injury, numbers of which were lost from simple inflammation and pressure, or from sepsis. There is very little doubt that most, if not all, of the cases to which I refer would have recovered if he had known the secrets of antiseptic surgery, which we shall see later he very nearly stumbled on to accidentally, and the modern use of antimony in the prevention of simple inflammatory conditions. When inflammation of the contents of the skull threatened to arise after injury of the head, POTT's only available remedies consisted mainly of phlebotomy and the trephine, and he certainly used them most freely. Where he employed phlebotomy and the trephine in cases of threatened intra-cranial inflammation, we now use antimony, either in good big doses at long intervals or in small doses frequently repeated, and if it is a simple uncomplicated inflammation, the antimony very often cuts it short and saves the patient's life and obviates the necessity for an operation.

Before POTT's time *Fistula in ano* was treated on a principle advocated by CHESLETON, by first dilating the sinus with sponge tents, then one of the blades of a large pair of forceps was to be thrust up the sinus, so that it and the other within the intestine pinched it between them. The piece so pinched was next to be snipped out by repeated attacks with a knife or a pair of scissors. As POTT says:—"A very tedious and painful operation this must necessarily be, and by Mr. CHESLETON's account not always successful." POTT rescued the operation for fistula from the domain of undue severity and uncertainty, and placed it on the footing it occupies to this day. He says:—"The curved probe-pointed knife, with a narrow blade, I have always found to be the most useful and handy instrument of any. This introduced into the sinus, while the surgeon's forefinger is in the intestine, will enable him to divide all that can ever need division. The probe point of the knife will be received by the finger in ano, and will thereby be prevented from deviating, and, being brought out by the same finger, must necessarily divide all that is between the edge of the knife and the verge of the anus, and lay the two cavities of the fistula and of the intestine into one."

In the same way with the operation for *Internal Hemorrhoids* POTT shewed that the proper principle to employ in removing an internal pile, is to ligature it just below the middle, and not at its base, or by pulling it bodily with part of the mucous membrane from which it grows, through the noose and then tying it. If you look at the diagram, you will see that the wound left by the separation of the ligature in POTT's plan, is no larger than the knot, and as it never gapes, it heals up in a few days after the ligature comes away on the fourth or fifth morning; whereas it is also plain that the wound, when the base of the pile, or worse still when mucous membrane is included in the ligature, is necessarily a gaping one, and may take months to cicatrize. As in the case of fistula the principle of POTT's operation for piles holds good at the present time, whether the ligature, or the clump, or crushing, or any form whatsoever of excision, be employed for their removal.

It must not be imagined that piles and fistula are diseases of too trivial a nature to demand our serious notice. They cause an immense amount of misery and suffering in the world, which can only be properly alleviated by treatment founded on correct principles. It is well to remind ourselves occasionally of correct principles: for a very few months ago, there was a proposal in the *Lancet* to revive CHESLENDEN's operation of excision for fistula, and only last year a gentleman of my acquaintance came out from England, who was compelled to undergo treatment for four months after he landed in India, while an indurated wound in the rectum, due to the removal of too much tissue in an operation for internal piles, was healing up.

I much regret that time will only permit me to draw your attention to one more subject in surgery on which POTT left the record and stamp of his genius. I allude to *fractures*, and it is curious to note that almost every word he wrote on the principles of their treatment, more than a hundred years ago, is true to-day. He begins his tract on fractures and dislocations with the following quaint words:—"No part of surgery is thought to be so easy to understand as that which relates to fractures and dislocations. This is the opinion of a considerable section of the general public. They regard bone-setting as no matter of science: as a thing which the most ignorant farrier may become soon and perfectly master of: nay, that he may receive it from his father and family as a kind of heritage." In the treatment of fractures POTT insisted on the importance of setting the fracture, at the earliest possible moment after their infliction, and that it is wrong to wait for pain and swelling to subside, as these and other symptoms of the injury are due to, and are best remedied by rectifying, the faulty position of the broken fragments. But the pre-eminent principle we owe to POTT is that, considered abstractedly, neither extension nor counter-extension can even be necessary on account of the mere fracture, i.e., on account of the mere fragments, of the broken bone, which if left to themselves, remain just as motionless—just as absolutely still, and with no little tendency to move—as these pieces of bone on the table. POTT shewed that nothing can move the fragments of a broken bone but the muscles which are attached to them, and that

the difficulty we meet with in making and in keeping up extension of the broken limb, proceeds from the muscles only. To extend the muscles by putting the limb into that position which puts them into a state of tension is, if not to irritate them and cause them to offer resistance, at all events to give them their greatest power whether of displacing the fragments of the broken bone, or of opposing their reduction or setting. On the other hand putting a limb into such a position as shall most relax the whole set of muscles belonging to or in connection with a broken bone must best answer the purpose of incapacitating the muscles from acting upon it, and must remove the resistance they have it in their power to make attempts to reduce or set it. It follows that such a position of the broken limb as will best relax the muscles, must be the best for setting the fracture and for keeping it set afterwards.

A moment's reflection will prove to you that this is generally the position which the patient naturally puts a broken limb into, in order to obtain ease until he gets proper assistance. POTT insisted, and we all know it to be true, that when people are brought to hospital with the femur broken, we seldom or never find them lying in the *dhoolie* or palanquin with the leg and thigh straight and resting on the calf and heel; but, on the contrary, we almost always find them with the knee bent and the broken thigh lying on its outer side. POTT treated fractures of the thigh in this position, and I recollect STROMEYER, when he visited Netley, describing the evil results of extension in the treatment of fractures during the Franco-Prussian War, and stating positively that the position described by POTT, without splints, gave infinitely better results than extension and appliances made immovable by starch, gum, or plaster of Paris.

It is, of course, true that the extension by immovable appliances can only be intermittent, and that moreover we now have the pulley and weight with which to maintain continuous and non-irritating extension in fractures of the thigh; but it is a question of some importance how far this method could be employed in military surgery or in time of war, and it is a method which is certainly not applicable to any fractures but those of the femur. In the upper extremity, POTT's principle is even more obvious than it is in the lower, and yet I see it stated in the last new text-book on surgical anatomy that the proper way to set fractures of the arm is to extend the limb. POTT states that with the arm extended the difficulty of setting a fracture is very great, and it is very painful to the patient; while if the arm be kept in the extended straight position, the fracture will inevitably be displaced and lie uneven. But we now can go much further than this. There is no fracture of the upper extremity which is not practically set by simply raising the arm and flexing the forearm. Fractures of the upper extremity, of the shaft, and of the lower extremity of the humerus, as well as all fractures of the forearm, including that of the lower end of radius, are all set by this easy manipulation. In other words, directly the forearm is bent in any of these fractures, and the muscles in connection with the broken bone put out of action, there is no more real difficulty, and hardly any more pain, in placing the ends of the broken bone in

apposition, and in keeping them so, than in doing the same thing to the fragments of the broken humerus which I hold in my hand. The knowledge of this fact is the key to the simple and easy treatment of fractures. No doubt the surgery of broken limbs is susceptible of improvement, as for instance by LANOWSKI's method by rapidly hardening the callus by massage and movement of the neighbouring joints, but POTT's principles can never for a moment be lost sight of.

The general position with regard to fractures then, comparing POTT's day with our own, is this:—The obstacle to the setting of fractures is the action of the muscles. In POTT's time there were two available means of overcoming or counteracting this action, namely, (1) extension, and (2) position, and POTT proved that extension is both unnecessary and painful. Modern surgery is armed with three ways of doing the same thing, namely, (1) extension, (2) position, and (3) chloroform. If extension is employed, chloroform ought to be given in the setting of all fractures; but if position is relied upon, and it is entirely sufficient, the pain is so slight that chloroform is unnecessary in the setting of any fracture, but the one exceptional fracture of the thigh. Not the least interesting feature in the connection between POTT's principles of fracture treatment and modern surgery, is the fact that the great surgeon himself once sustained a compound fracture of the leg. Amputation was decided on at a consultation of the St. Bartholomew's Hospital Staff, and was within an ace of being performed, when the opinion of one alone of the consultants prevailed, and the limb was preserved. The fracture then united without inflammation, exactly like a simple fracture, and POTT attributed this happy result to the circumstance that when the protruding end of the broken tibia was reduced, the valve-like opening of the soft parts closed behind it in such a way that the entrance of air into the wound was prevented, thus accidentally foreshadowing, a century in advance, the scientific aseptic method of the immortal LISTER. In 1866, exactly 110 years after POTT's accident, which so nearly led him to the discovery of Listerism, LISTER himself treated a compound fracture in the Glasgow Royal Infirmary by methodically preventing the entrance of air into the wound by means of an artificial scab of lint, blood, and carbolic acid; and in this way he opened up the new era, which we call, and which is in truth, modern surgery.

The connecting link between PERCIVAL POTT and modern surgery is SYME. POTT died in 1788, SYME was born in 1790. Throughout his career which ended in 1870, SYME upheld and consolidated POTT's surgical principles. But he was not the man to follow any beaten track, and during the fifty years he practised and taught, he introduced many new measures into surgery which will perpetuate his name as long as medicine lasts. In 1823, when barely three and twenty years of age, he performed amputation at the hip-joint for the first time in Scotland; and in 1829 he excised the whole of the upper jawbone for the first time in Great Britain. A report of the latter case reached the *Lancet* and was published with the following editorial note in a bracket:—"We need no ghost from the grave to tell us what has become of the patient," but a

month later the *Lancet* had the pleasure of recording his complete recovery. SYME established the operation of excision of joints in England: his operations on aneurisms have never been surpassed in boldness and originality; he showed that amputation of the whole arm with the scapula is a feasible procedure; and he was the first surgeon in England who successfully removed the whole tongue.

It was not alone in great things that SYME excelled. It is to him that modern surgery owes the simplest and most perfect operation for harelip: the only faultless amputation known, that of the foot by the heel-flap; and the easiest and most lasting method of curing organic stricture of the urethra. In harelip SYME demonstrated that the way to close the gap and at the same time make an absolutely straight lip, without any inequality or notch, is to entirely remove the margins by an incision which terminates on either side in the straight part of the lip quite beyond the angles of the gap. This plan is applicable to all cases of the deformity, single or double, and in no other way can a perfectly straight lip of uniform thickness throughout be obtained. This is a photograph of a case of double harelip operated on by SYME's method seven years ago, in which the cicatrix in the probolium has unfortunately become affected by keloid. Not only is there a full lip, straight, and without even the slightest trace of a notch, but you cannot see any sign whatever of cicatrix in the lip itself, and curiously enough the keloid does not affect any part of the lip. In fact there is no cicatrix in the lip, and what cicatricial tissue there was, after the operation, must have been absorbed; otherwise, it would have been affected by the keloid growth. With regard to SYME's amputation I need merely remind you that the tendency of all modern surgery is to make amputation flaps of skin, and it will be sufficient to quote the opinion of SIR WILLIAM FERGUSON about SYME's amputation in particular. FERGUSON says:—"I know of no amputation—no style or kind of amputation—which deserves more high consideration. There is everything associated with it to lead to perfection in our modern estimation of such a proceeding: a long stump, and a perfect covering to the end—a covering more perfect than that of any other stump: for the reason that the very bit of soft material on which we naturally stand, is still preserved for the future basis of this support. It is the greatest addition to amputation in modern times."

The great principle SYME enunciated with reference to organic stricture of the urethra (which we now know to be true) is that no stricture through which urine can pass is impermeable, and that organic stricture can be cured by what is called dilatation, and by nothing else. Dilatation in the surgical sense of the term consists in passing a bougie through the stricture, using a larger one every third or fourth day till the full size is reached, and then continuing to pass full-sized instruments afterwards until the stricture is cured. The remarkable circumstance about this result is, that it is the passage of the instrument over the diseased surface which effects the cure, and not any mechanical stretching or dilating by multiple splitting. The treatment can be shortened by dividing the stricture either by internal urethrotomy, or by splitting it with a

Holz's dilator; so that a full-sized bougie can be passed without delay at the first sitting. The disadvantages of internal urethrotomy are that the cutting instrument is out of the sight and of the direction of the finger of the operator, and that the cutting cannot be confined to the diseased part alone of the urethra. On the other hand, with a properly made dilator such as this, which MOORE, ARNOLD of London made for me, nothing but the strictured part of the urethra is split, and it cannot injure the healthy portions of the urethra; in point of fact they are never injured or interfered with by it in any way.

The next noteworthy phase of SYME's genius, which has had a remarkable effect upon modern surgery, was his almost intuitive perception of the cardinal point or essence, not only of an obscure case of disease, but also of new procedures and propositions in surgery. When SIMMONS brought chloroform to the notice of the profession, SYME very quickly perceived the nature of its action, and laid down rules for its administration, which have been proved by clinical experience, and by the experiments of the Hyderabad Commission, to be entirely sufficient when strictly followed to ensure the safety of the patient.

SYME's rules are and I beg you will consider them well:—"The points we consider of the greatest importance in the administration of chloroform are, first, a free admixture of air with the vapor of chloroform, to ensure which a soft porous material is employed, presenting a pretty large surface, instead of a small piece of lint or any other apparatus held to the nose; secondly, if this is attended to, the more rapidly the chloroform is given, the better, till the effect is produced, and hence we do not stint the quantity of the chloroform. Then, and this is the most important point of all, we are guided as to the effect not by the circulation but entirely by the respiration; you never see anybody here with his finger on the pulse while chloroform is given. *We never continue the inhalation beyond the point when the patient is fully under the influence of the anæsthetic.*" Finally SYME accepted and adopted LISTERISM as the perfection of surgical science, in that it keeps away or removes from wounds every source of external irritation and contamination which can interfere with the natural processes of healing or cicatrization. The LISTERIAN principle came to SYME as the most fitting termination of his labors in surgery, and he welcomed it with the quiet satisfaction of a successful general who has taken a leading part in an arduous campaign which ends in long anticipated victory.

This brings us to the consideration of the direct influence of SIR JOSEPH LISTER on surgery. However much the teaching of FORT, and later of SYME and his contemporaries, had led up to the antiseptic principle; or had, as it were, prepared the way for it, it came eventually as a surprise, and it revolutionised the surgery of the civilised world. The change was complete and final, though LISTER has since improved his methods, as the principle has been developed and circumstances have seemed to require it. The antiseptic method of LISTER showed us exactly how to attain the very thing surgeons had been striving after for so long, but which no one had previously discovered. No surgeon had made greater efforts in this direction than the French. I spent the year 1855

studying medicine in the Paris Hospitals, first in the service of ALMOND GOSLIN at the St. Louis Hospital, and later in that of MARSENGUE at the Hotel Dieu. ALMOND GOSLIN thought he had discovered the passages for surgical ferrets and blood poisoning in lichen dressings of alcohol. He was undeceived by one of the worst outbreaks of pyæmia in the St. Louis Hospital, which it is possible to imagine—one of his patients actually died of pyæmia after the amputation of a finger. MARSENGUE worked in a different fashion. His idea was that it was impossible to keep the germs of putrefaction, whatever they might be, out of wounds, and he therefore endeavored to prevent organic fluids from collecting in them, by exhausting them with an air-pump—which the patient had to work himself—and which was, on this account, impracticable. In other places it was hoped that by giving patients more cubic space in larger, better constructed and better ventilated hospital wards success would be obtained. As to the value of this plan many of you may recollect what happened here in Calcutta. The Medical College Hospital was very nearly condemned as unfit for the treatment of surgical cases on account of inveterate pyæmia and erysipelas. At one time all the surgical patients were placed in tents, but, if anything, the erysipelas and blood poisoning were worse in the tents than they had been in the wards. All other attempts to successfully stamp out septic processes in wounds failed, and there is no more to be said about them, but that they failed because they were not LISTERISM. The changes brought about by the introduction of the Listerian principle were mainly two-fold, one immediate, and the other remote. The immediate change was that hospitals in every part of the world, which had previously been considered unhealthy, became healthy under the antiseptic system, and it was found possible to keep surgical wounds absolutely free from sepsis and infection, no matter in what hospitals they were treated. The remote changes effected by the Listerian principle in surgery is very ably explained in WATSON CHEYNE's paper on "Modern methods or wound treatment" in the *Lancet* of 17th November 1894. He shows that in the surgery of compound fractures and dislocation, in that of the veins, of diseased joints, of hernia, of the abdomen, thorax, and brain, of cancer, of gland disease, of gangrene and of many other conditions too numerous to mention, a vast alteration in practice has occurred, which, from a purely surgical point of view, is entirely due to Listerism and that the area of surgery has been enormously extended and expanded in almost every conceivable direction. MR. CHEYNE truly states that formerly amputation was performed in compound fractures, in cases where the limb is now saved with certainty. It is a mistake however to condemn our predecessors on account of the amputations, they were mostly compelled to perform for compound fracture. In ordinary cases, in the pre-Listerian days, amputation was often the best treatment available, and many a patient lost his life owing to humane attempts to save limbs, which afterwards became the seat of fatal sepsis. I remember an experience of a surgeon who was a surgeon who was with "Banting's division" during the American Civil War.

A soldier was shot through the elbow joint. The surgeon advised amputation. The soldier objected and vowed that if he recovered he would shoot the surgeon who took his arm off. After a consultation the operation was performed and the man was sent to a hospital in the rear of the army. When the war was over the surgeon was walking in New Orleans one day and met him, and instead of shooting him the latter told him that he owed him his life. In the hospital to which he had been sent after the amputation he saw many soldiers with wounds like his own, in which the limb had been preserved, but they all died. He was the only one of the whole lot who recovered, and the amputation therefore in his opinion saved his life.

With regard to the theory of Listerism I do not profess to be an authority. The theory of sepsis you will doubtless accept as correct: but the theory of suppuration and of pyogenic organisms is, in my opinion, too simple on the one hand, and too far fetched on the other, to cover the whole field of surgery and inflammation that is embraced by Listerism. In WATSON CHEYNE's article pyogenic organisms are said to be the cause of suppurations in wounds, but I do not find a word about the inflammation which must precede it. There is no doubt that LISTER has demonstrated the power of the tissues to destroy bacteria, but the citation of this fact to account for the almost invariable union by the first intention which takes place in the operation for harelip, appears to me to give it undue importance. A more reasonable explanation is to be found in the impossibility of any collection or lodgment, either of fluids or of bacteria, between the surfaces of wounds, which, like those for harelip and ovariectomy, have a double exit for surplus discharges and exudations. When the wound is properly adjusted in these cases, the amount of exudation is sufficient to secure union, and no more. But if one or two stitches are put in too tight, the wound inflames in the track of the sutures and it will be lucky if union by the first intention is not prevented by the inflammation affecting the whole wound. Without attempting to reconcile opposing theories, however, we can state confidently that the Listerian principle arms the surgeon at all points in the treatment of wounds, which for practical purposes may be divided into three great classes. In the first class may be placed all operations, as WATSON CHEYNE puts it, through unbroken skin, and all traumatism in which the avoidance of septic or infective complications can be prognosticated or anticipated with certainty. The precautions and dressings in wounds of this class must be carried out in strict accordance with the Listerian plan, and they then heal by the first intention, without inflammation or suppuration all wounds in which union by the first intention without inflammation cannot be reckoned on with certainty fall into class two, which therefore embraces wounds of a doubtful nature as regards sepsis, i. e., wounds in which it is highly probable that sepsis has already commenced owing to a self-evident cause like delay in treatment, or to an obscure cause such as is found to be at work in many forms of abscess of the liver. Lastly this class includes the immense variety and number of wounds where sepsis exists beforehand: the type of which is to be found in SYME's amputation of the foot

for caries, with suppurating sinuses and surfaces which cannot be excluded from the operation wound. In this very large class of wounds antiseptic precautions and dressings are employed, but the essential factor in obtaining and maintaining asepsis is to keep them wide open, and convert them, as far as possible, into superficial wounds until they can be closed without risk. In abscess of the liver this is done by excising two or more ribs. In SYME's amputation for caries the heel flap must be kept wide open until granulation is established. It may then be brought into its normal position, and union by the third intention will at once be obtained.

Expense in wounds of the first class.—The dressings in wounds of the first and second classes must be antiseptic; but they need not be either irritating to the patient or expensive to the Government or municipalities who have to pay for them. In the Nizam's hospitals we are adopting the cheap antiseptic dressings recommended by NERVE of Cashmir in the *Edinburgh Medical Journal* of November last. They are cheap and effective, and do not involve the indiscriminate use of poisonous drugs like iodoform, which is not an antiseptic at all, and is of no earthly use except in soft chancre.

The third class comprises wounds, with double exits, such as those for harelip, and abdominal sections in which drainage is not necessary. In abdominal sections the most rigid antiseptic precautions are necessary during the operation to prevent contamination or infection of the peritoneal cavity; if drainage is required, these precautions have to be extended to the discharges, and Listerian dressings must be employed. But if the peritoneal cavity does not require drainage, the wound in the abdominal parietes needs no dressings. It should be treated as we always treat it, exactly like a harelip. Antiseptic collodion should be painted over it after the sutures are applied, and once a day subsequently until they are removed ten days later. In abdominal section whatever discharge or exudation there is from the wound under these conditions tumbles into the abdominal cavity, where it is absolutely safe.

Such is very briefly the practical position of wound treatment at the present time. It is the surgeon's duty to prevent sepsis in all wounds made through unbroken skin, and to arrest it without delay in all wounds where it already exists. Whether LAWSON TAIT can accomplish this object by enlarging his hospitals and by what he styles the strictest possible cleanliness; or other surgeons can do it by aseptic filtration dressings; or WATSON CHEYNE by true antiseptic methods, it is all one and the same thing—the fulfilment of the Listerian principle. No doubt before 1866 wounds did heal, and from time to time in the future will heal, without Listerism, but this is not the point. The point is that we now know how to protect wounds from both putrefaction and infection, and to ensure their union by the first intention, almost with mathematical certainty and precision, without inflammation or suppuration; and no one can pretend that we knew how to do this before 1866, or that we owe our knowledge to anyone but SIR JOSEPH LISTER.

It is not difficult to estimate at its true value the immense influence of the late SIR JAMES SIMPSON on modern surgery. Who actually found out that there is such a

chemical compound as chloroform is a matter of no consequence now. SIMPSON discovered its uses as an anæsthetic; it was he who established its employment on proper principles in surgery, and to him belongs the credit. I have quoted SYME's rules for the safe administration of chloroform, and SYME himself said: "I am very far from taking any credit to myself, all that I have done has been to follow the example of Dr. SIMPSON." The clinical value of SYME's rules is proved by the fact that those who follow them give chloroform with uniform safety all over the world, while those who do not follow them, and watch or depend upon the pulse, can not do so. This is not my own statement; it is what those who watch the pulse themselves state, that no one can give chloroform with uniform safety because it acts upon the heart, and that therefore a certain number of deaths are unavoidable. The heart theorists did not accept the clinical statistics of SYME's followers. They said "what is the use of your statistics, which simply shew so many administrations without a death, when we have deaths under chloroform every day, which we are convinced are due to direct failure of the heart;" and in 1889 they demanded that our clinical statistics should be abandoned or supported by experiments on animals with self-recording apparatus. Accordingly in virtue of the kindly and wise liberality of the Nizam, the Hyderabad Commission was appointed, on my suggestion, to determine once for all whether SYME's rules are right or wrong. The Commission proved that chloroform causes death by stoppage of the respiration and not by stoppage of the heart. One of the few points on which the Commission did not furnish any explanation was with reference to what occurs after the breathing stops; and it was for a long time supposed that asphyxia supervened, on failure of the respiration, and was the cause of death. This idea was shewn to be wrong by VICTOR HORSLEY's experiments on the mode of death in bullet wound of the brain. Formerly it was believed that when a bullet is fired through the cerebrum instantaneous death takes place from stoppage of the heart. VICTOR HORSLEY demonstrated that this is not the case; that death is caused by hydro-dynamic pressure on the respiratory centre and sudden complete arrest of the respiration. The mode of death is on all fours, to use MR. HORSLEY's own expression, with death from chloroform, and one tracing serves to illustrate both. The respiration stops—suddenly in bullet-wound of the brain, gradually, as a rule, in overdosing with chloroform—and there is no asphyxia. The heart being deprived of its nutrition runs down and stops, and so complete is the resemblance between the two that if no time is lost the breathing may be restored, in bullet wound of the brain, just as it may be in overdosing with chloroform, by artificial respiration.

The Hyderabad Commission not only proved that SIMPSON and SYME were right, but it rid modern surgery of the bugbear of direct failure of the heart under chloroform, and of chloroform syncope; and it is just as irrational to stick to it and to bring forward cases to prove that death from chloroform is due to direct heart failure; as it would be, in the face of HORSLEY's experiments, to assert that death from bullet wounds of the brain is due to syncope and not to stoppage of respiration. It is true that the

Hyderabad Commission's experiments were performed in India, but, if it is necessary to argue for this matter of fact, it is enough to remind you that they could not possibly have been performed in sufficient number to satisfy LAUDER BRUNTON anywhere else, and the effects of chloroform, no less than of bullet wound of the brain, are precisely the same in India as they are in Europe.

Another point which was left undetermined by the Hyderabad Commission, but which is more of physiological than of clinical and practical importance, is the question of the exact and immediate cause of the fall of blood pressure that occurs in all forms of anæsthesia produced by chloroform, or by ether, or by gas, or by asphyxia. To elucidate this PROFESSOR GASKELL was asked to make further experiments, for which the expenses were again generously met by the Nizam's Government. As the result of a series of very ingenious but complicated experiments GASKELL has been led to contend that the fall of blood pressure is actually the result of the action of the chloroform on the heart tissues, though at the same time he believes there is practically no danger to the heart in the administration of chloroform, and agrees with the Hyderabad Commission that the supposed occurrence of direct cardiac syncope is a myth. It is unfortunate that this opinion of GASKELL's, qualified as it is, should be taken as a reason for believing that chloroform is dangerous to the heart, although such danger is repudiated by GASKELL himself, who should certainly be the best judge of the limits of the peculiar action upon the heart in which he believes. Moreover, a fall of blood pressure is inseparable from all forms of anæsthesia at present known to us, and consequently if we are to give up chloroform because it causes a fall of the blood pressure, we must also give up ether, nitrous oxide gas, and every other form of anæsthetic. There is no necessity then, nor is this the place to discuss the reasonableness or otherwise of GASKELL's peculiar views.

I have only one further remark to make about the Hyderabad Commission, and I make it with an amount of pleasure which I shall not attempt to disguise. The success of the Commission's experiments was entirely due to DR. BOMFORD. It was he who recorded on the tracings of the manometer every fact as it occurred. If you examine the specimen tracing sent round, you will see what perfect work this was and what a tell it must have been to carry out. But this is not all. Many physiological facts were brought out by the Commission's research, for which DR. BOMFORD has never received the credit to which he is justly entitled. He discovered that the fall of blood pressure, which is produced by the direct action of chloroform, is not, as was previously supposed, dangerous; and that asphyxia does not raise but always lowers the general blood pressure. Lastly, DR. BOMFORD made it clear that the action of the vagus under chloroform, which up to 1889 had been universally regarded as a source of peril, is a safeguard; and this led to the remarkable and beautiful discovery that inhibition of the heart by the vagus can never do it anything but good, and that it is paralytic, and not stimulation of the nerve, which is dangerous and induces the heart block and a gray to injurious influence.

Finally as you all know, the acknowledged safety of chloroform in India has been accounted for in various ways by our brethren in England. It does not appear to have struck them that the real reason for the safety of chloroform in this country is that, for many years past, the principles of SIMPSON and SYME have predominated throughout the whole of India, and it is not too much to state that the general adoption of these principles in modern surgery in future will alone render the benefits of SIMPSON'S priceless discovery unlimited.

Gentlemen, I have finished. I have endeavoured to bring before you this morning some of the principles of surgery which have been handed down to us by men like POTT and SYME. Their greatness and success as surgeons lay largely in their profound knowledge of anatomy, their choice of simple procedures and methods of operation, and their undivided responsibility for everything connected with the treatment of their patients. We cannot every one of us be a SYME or a TREVEN—the beau ideal of a modern surgeon—but we can all follow great principles and noble examples; and of one thing I am quite certain,—India can and will produce her full share of great men in our beloved profession.

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A RETROSPECT OF OPHTHALMOLOGY IN BENGAL.

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OPHTHALMOLOGY as an exact and accurate science is as modern as bacteriology. As a crude art, it is as ancient in Oriental literature as the Hindu Sastras. Away back in the Dark Ages, Asiatic practitioners of medicine recognised and wrote about and dogmatised on the treatment of most of the disorders of the eye that are known to ophthalmic surgeons of recent date.

With the invention of the ophthalmoscope a new era dawned upon the domain of ocular pathology and therapeutics, and with this scientific achievement have come all those advances in Western ophthalmic science and practice that give it so high a place when compared with the art as it is found in the teachings and practices of Orientals. There must always be given a recognised value to the advantages which Western ophthalmologists had over Orientals in their knowledge of ocular diseases and their treatment. From the teachings of anatomy and physiology with the West, there was an intimate knowledge of the structures and themes of the organs of vision, their special functions and changes from health to disease, which were rendered easy and manageable by the light of sound pathology and morbid anatomy. These were all advantages which placed the West on a much higher platform than the East. Yet the fact remains to the credit of Oriental ophthalmic art that, shorn of all these helpful scientific auxiliaries, our ancestors in medicine in Bengal and throughout Asia successfully combated nearly all the best known disorders of the human eye. Such diseases as conjunctivitis, iritis, keratitis, ulceration of the cornea, non-specific and specific ophthalmia, granular lids, ectropion and entropion, cataract in its various forms, the causes of faulty vision and blindness, were all treated systematically and very successfully.

It must be admitted, however, that while Oriental medical literature had its place in the archives of the learned, the flood-gates of knowledge were closed to all but a select few, and the bulk of Oriental practitioners were illiterate so far as book-learning went, and their practical knowledge, which was often exceptionally good, was gained by a species of discipleship and governed by the teachings of tradition rather than any written precepts.

With this preamble I come to the era which marks the dawn of Western light and education, not only in the province of Bengal, but throughout British India. My remarks, therefore, whilst they tend to portray the state of ophthalmic science in Bengal, have an intimate relation to the history and spread of this important branch of Western medicine throughout India; for Bengal was the starting point of the introduction of Western education in every science and art, as they are found throughout the Indian Empire of to-day.

The history of modern ophthalmics in India dates from the establishment of the Medical College in Bengal in the year 1835. Prior to this a number of surgeons of the old Honorable East India Company's service had opened dispensaries in various stations in Bengal, notably in Calcutta, where the poor had their ailments gratuitously treated and often at the entire cost of these doctors.

In these out-door infirmaries, as they were called, there were a few beds for operation cases, and here Western medicine gained many of its earliest disciples, who became useful and distinguished practitioners. Not however till 1835, that is the opening of the Medical College and Hospital in Calcutta, was any well organised effort made to teach anatomy and physiology. Sixteen years later Western ophthalmics found an able exponent in Dr. MARTIN, whose appointment to the chair of ophthalmic medicine and surgery dates from the year 1851.

His successors, Drs. ACHER, MACNAMARA, CAYLEY and JONES, have all been men of great ability, and have left brilliant legacies of their work behind them. CHARLES MACNAMARA, who is now one of the leading ophthalmic surgeons of London, gave India the first work of eye surgery and medicine based on Indian experience, and this book is still a valuable guide to our students, in spite of the gigantic strides that ocular therapeutics has made in the past two decades. I will deal briefly with some special points connected with ophthalmics in Bengal, and of necessity I can only touch the merest fringe of my subject, which has admittedly a very wide range. The world has been busy with ophthalmics, and never in the history of profession has there been such a profuse display of knowledge and original research in ocular therapeutics, as we have seen in Great Britain, America, France, Germany, and Europe generally at the present time. It is not my province to deal with new light and recent knowledge, but I am called on to sift the garnered grain of past generations, and to present, if possible, in a nutshell the work of others, whose lives and records are now matters of history. In Bengal we have ocular diseases common to India generally, but I am concerned only with this province, and the limit of time and space remind me, and you also, of the duty of brevity. My remarks therefore will scan such familiar disorders as cataract, ophthal-

nia, neopatorum, glaucoma, atrophy of the disc, and disorders of refraction and accommodation.

Cataract.—The occurrence of cataract in Bengal is very common, and this may be judged by the fact that on an average nearly three-hundred operations have been performed yearly in the Eye Hospital of the Medical College during the past thirty years.

The most generally performed and most successful method of operating for cataract in Bengal has been and is still by simple extraction of the lens without iridectomy, the pupil being previously dilated with atropine. The incision involves about one-third of the cornea, and is made as nearly as possible in the sclero-corneal junction. There is much in success which depends on the individuality of the operator, and this cannot be exaggerated. Clean steady fingers and a delicate dexterous touch, with a high moral appreciation of the responsibility, do more to make a record in successful ophthalmics than all the book reading in the world. I am able to corroborate this assertion by my own experience in watching the exceptionally able and dexterous operative work of my old teacher and friend, Dr. CHARLES MACNAMARA, a former professor of ophthalmics in the Calcutta Medical College Hospital. His modified linear extraction, which bears his name, involved no iridectomy. The pupil having been previously well dilated his incision so perfectly performed by a special knife of his own invention, left it an easy matter to introduce a scoop, and with a gentle pressure exerted upon the circumference of the lens, caused it to be rotated on its axis to find a rest in the concavity of the scoop, and thus delivered from the eye with the least possible disturbance of the adjoining structures. The lens with its capsule entire so freed resulted invariably in the most perfect success of vision possible.

Such too was the special individuality of PROFESSOR HENRY CAYLEY of our College, whose operative work with cataract was extremely successful from the combined methods of PROFESSOR MACNAMARA and VON GRAEFES. The success of these two Calcutta ophthalmic surgeons gave result of eighty-seven per cent. of cures by MACNAMARA'S method and seventy-seven per cent. by VON GRAEFES. It is important in this connection to state that these results were from hospital patients, in whom there was no choice of selecting suitable or unsuitable cases. The records of these surgeons in private practice, where selection was the rule, yielded far better results, and a success of ninety to ninety-five per cent. was nearer their average. Personally my experience during a practice of nearly thirty years, which has been guided largely by my association in work at the Ophthalmic Hospital for fourteen years with Drs. MACNAMARA, CAYLEY and JONES, had led me into selecting the operation for cataract usually performed by these surgeons, combined and modified, that is, a VON GRAEFES, the section being however purely corneal, and thus avoiding iridectomy in every possible case; and I may with gratification say that I have had results that equal those of my revered teachers.

The operation which I have been accustomed to perform for many years past is preceded by preliminary antiseptic precautions. I wash my face and hands and then cleanse the face, eyes and eye-brows of the patient with cotton and a solution of boracic acid (one grain to an ounce of water), the lotion being freely put into both

eyes while the patient is in bed. I now drop a freshly prepared 3 per cent. solution of cocaine into the eye to be operated on, which has already for two or three days been under the influence of atropine. The instruments are dipped in boracic lotion and then used. Special attention is paid to the knife which is tested before operation as regards sharpness and polish. I use a stop-speculum. The section made by a GRAEFES knife is corneal, and occupies nearly the upper third of the cornea. The left hand is used for the left eye, and the right for the right. The section is completed by cutting directly through the cornea. It is so cut through that it allows the edges of the section to come directly together. I then take the curette and place it on the sclerotic at the lower part near the cornea sclerotic junction and deliver the lens by pressure. I allow a little time to elapse if necessary for accumulation of aqueous to reveal any lenticular substance which may remain behind. The iris invariably gets into its place; if not, I set it by gentle manipulation or by allowing the rays of light to act on it. Sometimes it may be that I have to take the aid of the curette to adjust the section and to replace the iris. I then drop in a 4 grain solution of atropine to put the iris at rest, and apply a pad and bandage to both eyes.

I perform iridectomy, if the pupil has not responded sufficiently to atropine, or if the lens is hard and large, or if there is adhesion of the pupil. Where the lens requires to be removed by a vectis or a curette, or if by accident the iris be injured, and when the patient is incapable of enduring the quiet indispensable to the prevention of prolapse of the iris.

Concerning loss of vitreous in cataract operations.—This accident was held for many years by operators in Great Britain and on the Continent as a calamity involving insecurity to after vision in cataract operations. It is a remarkable fact that Dr. CHARLES MACNAMARA held and taught as far back as 1868 that loss of one-fourth of the vitreous was no bar to a perfect recovery of sight. His declaration on this matter was stoutly contested in London, but time has proved that MACNAMARA was right, and now our friends in Europe are reconciled to his views.

In 1880 I recorded the following statistics on loss of vitreous, which were read in my paper on this subject before the Calcutta Medical Society.

From the records of 926 cataract operations in the Calcutta Ophthalmic Hospital, I have found there was loss of vitreous in 122 cases, in which the methods of operation followed were:—

1st.—Upper section with iridectomy without laceration of the capsule in 99 cases.

2nd.—MACNAMARA'S operation in 21 cases.

3rd.—Lower section with iridectomy and laceration of capsule in 2 cases.

In these 122 cases, 69 recovered good vision and 5 fair vision and 28 cases failed.

The causes of failure were: 10 by iritis and 9 by atrophy of eye ball, 8 corneal sloughing, and 4 pano-phthalmitis. In 5 of the 28 unsuccessful cases the vitreous loss was very large, and in the remaining 23 less than a fourth of this fluid escaped.

With regard to the quantity of vitreous lost in the 122 cases, in 9 there was slight oozing, in 91 the loss was less than a fourth; and in 22 more than a fourth, amounting to almost complete escape of the humour.

It will be evident that where vitreous was lost the quantity had very little to do with the result of the operation, for where the largest quantity was lost as in the above mentioned 22 cases, 17 were cured and 5 only were unsuccessful, so that the percentage of success was 77.

In the cases where the loss was less than a fourth, as well as those in which vitreous only slightly coozed out, 72 were successful, and 5 partially so.

Of the 926 cases, 787 were quite successful. In 34 cases sight was restored partially, and in 155 cases the result was unsuccessful, or there were 84 per cent. of cures. But it has already been shown that the percentage of cures in cases where the vitreous was lost was 77 or a difference of 7 per cent.

Out of the 926 cases, 113 were soft cataract, and in them there was no loss of vitreous.

From my experience I have found that loss of vitreous as a complication, generally occurs in operating upon the second eye when the first eye has been spoiled by maltreatment by *muls* or quacks.

There is a remarkable augmentation of cures in recent times due probably to more extended knowledge, the selection of operations, and to antiseptics.

But there is a regrettable drawback that every ophthalmic surgeon in Bengal has to contend with, and that is, the need of a practical surgical instrument-maker to sharpen cataract knives, as all instruments have to be sent to England for repairs. Reverting to the subject of augmented success in cataract operations, the recent experience of the Calcutta Medical College Hospital, in which undoubtedly individuality as a feature conducing to success, has played an important part, together with modern antiseptics, we find the report of the Eye Hospital of Calcutta with a percentage of cures that has reached the high figure of 95.56 per cent, but 76.13 has been the average for the past six years. Surely this is an achievement which reflects considerable credit on Professor R. C. SANDERS, our present ophthalmic surgeon.

In recent times the prevalence of diabetes in Bengal has added largely to the occurrence of cataract, and it is remarkable that these patients derive considerable benefit from a judiciously performed cataract operation. The later stages of diabetes which usually terminate in nephritic changes, afford abundant evidence of the great value of the ophthalmoscope as a diagnostic agent of nephritic retinitis.

Ophthalmia Neonatorum.—Bengal is the land of mendicants. It is no exaggeration to say that a million or more of the people of this rich and fertile province are beggars. This fact is of enormous significance and interest, when it is found that over sixty per cent. of these helplessly poor fellow-creatures are totally blind, and further that over forty per cent. of these visionless orbits owe their destruction to ophthalmia-neonatorum.

Total disregard of the simplest hygienic laws in the lying-in-room, the absolutely careless neglect of cleanliness of the infant immediately after its birth, are usually responsible for more than half the blindness one sees in Bengal. Household therapeutics limits the treatment of sore-eyes in infants to poulticing the eye-lids with black sulphide of antimony, or with butter and lamp-black (*majul*), or washing them with milk and warm

water or warm infusion, and these ablutions are so faultily done as to allow the lids to encase quantities of purulent matter, and thus the destructive and corrosive changes of the corneal structures go on, till vision is hopelessly ruined. If only our *dhoias* or native midwives could be trained sufficiently to regard the vaginal discharges as peculiarly prone to infect the eyes of their infant charges, how much the number of Indian mendicancy could be reduced, and how much of happiness could be added to the blighted lives of our fellow-creatures. For the treatment of ophthalmia neonatorum I have found the early application of a two per cent solution of nitrate of silver as eye-drops most beneficial. Of course it is an eminently preventable disease, and if sufficient cleanliness be observed in washing out the vagina before birth, and in seeing to the eyes immediately after birth, it can with certainty be shorn of its ill effects. As soon as the head of the child is born, both eyes should be wiped with cotton wool before they are opened, to prevent infection by any discharge which may be present, and the nurse should be instructed when washing the child for the first time, to use different water for the eyes with a pledget of cotton wool. When this has been done, one drop of a two per cent solution of nitrate of silver should be dropped inside each of the eyes. Of course, while cleanliness is absolutely necessary in every case, it is only essential to guard the eyes of the infant by nitrate of silver solution as a collyrium in those cases in which there is a suspicion of impure vaginal discharges. Frequent cleansing of the eyes is a *sine qua non* of treatment, and while antiseptic solutions of such reagents as boracic acid, perchloride of mercury, permanganate of potash, &c., play a helpful part as aids, the destruction of the morbid germs which created the disease, is most effectually performed by nitrate of silver.

Granular conjunctivitis.—Is a very common affection amongst the poor, consisting as it does of the formation of granular trachomatous bodies in the conjunctival connective tissue. I have found it extremely prevalent in Bengal. It is undoubtedly due to mal-hygienic conditions of life. Among the various forms of treatment I have found nothing to equal dusting the lids with tannic acid both morning and evening, then once a day, and later on every other day. In the meantime keep the eyes scrupulously clean by the frequent application of antiseptic drops, such as boracic acid and perchloride of mercury. Tannic acid sets up sufficient inflammatory change to cause absorption of the neoplastic bodies. Sulphate of copper was much used in former days. We still apply the *lepis divinis* to granular lids. But I think tannic acid can better reliably take its place.

The various reputed specifics of a decade ago, such as acetate of lead, quinine dusting, solution of perchloride of mercury, and strong solution of nitrate of silver, have all had their day; but sanitary measures, general tonics, and tannic acid dusting, hold the highest place in affording relief and cure to this troublesome and painful disorder.

Glaucoma.—Glaucoma is another commonly prevalent disorder in Bengal. Iridectomy is the sheet anchor of cure of this most dreadful affection. In Bengal much difficulty is experienced in inducing sufferers from glaucoma to undergo the necessary surgical operation of

iridectomy, and so recourse has long been had to various other forms of relieving intra-ocular tension by means of leeching and by ordinary antiphlogistics, but more recently the discovery of the great therapeutic value of eserine, has placed in the hands of Indian practitioners a most accommodating and efficient aid. The use of eserine affords relief for some time, and by and bye the patient makes up his mind for an iridectomy. In many cases a fair field of vision is maintained by the use of eserine, while the further progress of the disease is cut short.

Atrophy of the disc.—In this common ailment, the use of eserine collyria, and the subcutaneous injections of strychnine, have afforded the best results. It is remarkable how prevalent this disorder is among excessive tobacco-smokers and in those who use gunja and alcohol.

Disorders of Refraction and Accommodation.—The rigorous enactments of the Bengal Educational Code and the high mental tension which arises out of the keen competition that marks the training and education of our youths of to-day, have resulted in a most deplorable augmentation of the errors of refraction and accommodation; and so we find boys and girls of twelve to sixteen years decorated with spectacles—a sight that would horrify our forefathers were they to return to their mundane sphere.

In past times Hindu and Mahomedan ophthalmic practitioners had to face the amelioration of a very small number of cases of disorders of refraction and accommodation, and they devised pebbles of sorts to meet these defects. But these huge and unsightly glasses of our Indian ancestors in ophthalmic medicine, have given place to the delicate and well made spectacles of modern opticians. So necessary has become a knowledge of sight-testing that every general practitioner must equip himself with the means of aiding his patients and affording them relief to many insidious neuralgic manifestations which owe their origin to defective vision, or to errors of refraction and accommodation. My remarks both in their scope and measure, have of necessity been limited and brief, and for this I offer my regrets. Much that might have absorbed my attention in the wide range of ocular therapeutics remains untouched, but I venture to hope my feeble efforts may incite and encourage others to lay their views and their special knowledge of ophthalmology in India before the profession through our medical journals.

In conclusion, may I plead for a more systematic and thorough training of students in our Indian colleges in eye diseases? The tendency at present is to make expert opticians but poor oculists. The prevalent idea is that a good cataract operator is a good ophthalmologist. There is nothing more fallacious and nothing more hurtful as an impediment to the advancement of truly scientific ophthalmology. We need our students to be something more than rule-of-thumb prescribers of spectacles or gougers of cataracts. They must keep in touch with the ever-enlarging field of ocular pathology and therapeutics, and be well grounded in the allied sciences of medicine.

The specialism of ophthalmics is a paramount necessity, but it exists as an aid, and should be a guide to the general practice of medicine in those reflex pathological changes of which the eye is so unerring an index and the ophthalmoscope so true and faithful a guide.

No man should set up as an ophthalmologist unless experience and special education give him the stamp of honest fitness for such an onerous assumption. His specialist is the busy physician's most valuable assistant. He provides him with skilled hands, educated eyes, and trained ears, to do and see and hear that which he cannot undertake to do.

For ophthalmics our colleges have all the facilities so far as materials to teach with, subjects to practice, or students to teach are concerned, but the time allowed for teaching this important science and art is in most Indian colleges extremely inadequate. In speaking of materials, I mean patients, not apparatus. There is a marked lack of scientific appliances for the teaching of ophthalmics in all our Indian colleges, and the course of lectures, both theoretical and practical, are insufficient.

Let me express the hope that a new era will soon dawn on our country, and may this be hastened by the unselfish and generous aid of every medical official in India, who will thus gain the gratitude of a nation that owes all for her advancement in modern medical science to England and to England's sons.

A MIRROR OF PRACTICE.

THREE CASES OF CYSTITIS, WITH MISTAKES IN TREATMENT ARISING FROM INADEQUATE DIAGNOSIS.

By WILLIAM HUNTLY, M.A., M.D., B.S.C.

Rajputana.

CYSTITIS, difficult in itself to treat successfully, is often aggravated by mistakes in diagnosis, and the three cases noted below are all of them examples of this:—

Case I.—This case came into my charge a number of years ago in an English provincial hospital. The morning after my arrival I walked through the wards in company with the house surgeon whose place I was filling, and at the far end of the ward lay a young fellow suffering from chronic cystitis. The board above his bed shewed he had been in hospital for three months, and it was covered over with the usual variety of prescriptions for cystitis. His bladder had also been washed out with various solutions, but both lines of treatment had been ineffectual, and his case was looked on as hopeless; the idea being that he was suffering from tubercular disease of the urinary tract. There was a history of consumption in the family to support this theory, and certainly the general aspect of the patient gave it some countenance.

Attracted by the seeming hopelessness of the case and hoping that perineal section and drainage might accomplish something, I entered into a fresh enquiry of the patient's life.

The patient had no recollection of any specific disease, and indeed this had already been ruled out of the diagnosis. In washing out his bladder I made a careful examination of all the organs, and came across a small hard lump about the size of an almond, occupying the epididymis of one of the testicles. Was this an extension of the disease from the tract, and if so, did it support the tubercular theory, or did it point to venereal disease?

From its clear, thin, glassy appearance, was of recent origin, and its smoothness rendered the differential diagnosis more difficult. Weighing the various points, although I could find no mark of an old cicatrix on the penis, I decided in favor of specificity.

On this theory I at once stopped all treatment and put the patient on full doses of anti-syphilitic remedies. Five weeks later the patient walked out of hospital,—cured of his cystitis.

Case II.—This case came to Jodhpur Hospital. He was in a wretched condition, skin and bone, and carrying constantly in his hand a little earthen pot to catch the fetid urine as it dribbled away.

His history, if the man's story is true, pointed to great carelessness existing in several hospitals. He had been at the main hospitals of several big cities, and there had received such relief which, temporarily beneficial, left the man in a worse condition.

The man had a cartilaginous stricture extending inwards for about half an inch from the meatus. At the time of coming to me a probe was with difficulty passed through this. The surgeons at the various hospitals had simply slit up the meatus and let the man go. They could not have done a worse thing to him. The secondary effects of the slitting resulted in an additional narrowing of the stricture, and the man's life was a burden to him. He was willing to let me do anything, and as I did not care to put him under chloroform in his weak condition I saturated the stricture and its surrounding tissue with cocaine solution.

The thickened cartilaginous material was then dissected out. After this was done the tissue round the sound portion of the urethra was still further cut away, and when sufficient of the urethra had been cleared and part of the spongy tissue cut off, the urethral walls were pulled out and stitched back to the mucous membrane, a new meatus being thus formed of fairly sound tissue. It was impossible, with the constant dribbling of decomposing urine, to keep the parts clean, but in spite of a stitch or two rotting away, the result was altogether successful. A few months later the man returned to tell me that his trouble was all gone, power over the bladder was restored, and he had so improved that at first I did not recognize him.

Case III.—In this case there was a history extending back for four years. He had been under unqualified native practitioners who treated him for gonorrhoea.

There was no obstruction to the urinary flow, but the urine was of aropy mucous character, and the man, as in the last case, much reduced in strength and spirits. The passing of a sound revealed the cause to be stone in the bladder. The sound in passing along, seemed to me to glide in a groove between two somewhat smooth stones, and the point in advancing impinged on a third. Examination by the rectum revealed a rounded tumour about the size of a small orange protruding into the bowel. It was evident that I was dealing with calculi of some considerable size. On the following morning I extracted 10 stones by perineal internal lithotomy. Of these ten, eight weighed about four ounces. The ninth stone weighed one ounce and all the nine stones were faceted in the same manner as are multiple biliary calculi.

The tenth stone was much larger than any of the others; it measured 2½ inches in length, 2 inches in width, and 1½ inch in thickness, and was over three ounces in weight. The total weight of the ten stones was thus over eight ounces. In a little over three weeks the patient left the hospital well.

Remarks.—The above three cases are all, I think, noteworthy. The first illustrates the care with which we should come to judgment on a case, and the necessity of fully considering and examining every little detail in a case of doubtful or difficult diagnosis. The other two cases tell their own tale.

THE TREATMENT OF CARBUNCLE BY THE TOPICAL USE OF CARBOLIC ACID, ILLUSTRATED BY FIVE CASES.

BY JAMES R. WALLACE, M.D., L.R.C.P. & S. Edin.

Case I.—A wealthy Jewish lady of 40, in fairly good health, had a carbuncle as big as a crown piece over the lumbo-sacral articulation. It was much inflamed and had been growing for ten days when I saw it. There were about six openings on its surface, and a slough could be seen through them. Healthy pus oozed from the apertures. A fine probe with a little cotton wool twisted on it, dipped into liquid carbolic acid, was passed into each opening every morning for sixteen days and the surface covered with boracic wool. By the 12th day the slough had broken up and came away, and though granulation was progressing healthily, the cauterisation was kept up for four days longer. On the 20th day the parts were quite healed. Vinum Ferrum was given internally and a simple mixed diet of solids was taken throughout. There was slight fever on the first day, and this had been present for over a week. It disappeared on the fourth day of the treatment.

To economise space and to obviate repetition, I will analyse the points of the remaining four cases, as the treatment in all was same as in Case I.

| Case. | Age. | Race. | Condition. | Duration. | Carbolic applied. | Cured. |
|-------|------|----------|------------------|-----------|-------------------|-------------|
| II | 55 | Italian | Feeble anemic | 21 days | 9 days | In 12 days. |
| III | 61 | Indian | Flabby, weak | 7 days | 16 days | In 20 days. |
| IV | 80 | American | Emaciated anemic | 5 days | 10 days | In 14 days. |
| V | 43 | Scotch | Anemic, diabetic | 19 days | 19 days | In 24 days. |

Remarks.—Following the plan reported by Surgeon-Captain E. HAROLD BROWN, M.D., in these columns some time back, I treated these cases of carbuncle with carbolic acid. Dr. BROWN recommends the use of crystals. I found crystals hard to manage, and used the liquid acid with a cotton covered probe, and it answered well. In all the cases fever was present, and had been so in some degree from the onset of the carbuncle. Within four or five days in each case, the temperature fell to normal and remained so. The acid caused only slight burning pain for a few moments. The burning and throbbing of the ever present carbuncular pain was removed within one or two days after the use of carbolic acid. In every case iron wine was given internally. The diet was in no way restricted, the patients being told to eat what they liked best.

The rationale of the treatment of carbuncle by the topical use of carbolic acid as first suggested, I believe, by Dr. HAROLD BROWN, is based on the pathology of this disorder as being akin to a circumscribed necrosis of the cellular and sub-cellular tissues of the integument, due to localised inflammation dependent on some form of morbid blood stasis of systemic origin. A lowered state of the general health and certain specific disorders such as diabetes are accepted as predisposing to this peculiar necrobiosis. It is, however, clear that though the origin of carbuncle is to be found in a hæmic dyscrasia, certain local products of the peculiar necrobiotic changes that attend it, if not counteracted or destroyed by some topical application, have a marked tendency to aggravate the development and growth of carbuncle. It is important, therefore, since the increase of the local necrobiosis is always attended with proportionate constitutional disturbance and risk to life, that these morbid processes be destroyed by some rational method based upon correct pathology. These ends seem to be fully served by the topical use of carbolic acid, assisted by a generous regimen and the use of iron wine. The first evidence of the remarkable therapeutic value of carbolic acid as a germicide, is seen in the disappearance of septic fever and the subsidence of local and constitutional nerve disturbance in the remission of all pain.

Surely in this simple plan we have something which supercedes the barbarous crucial incision, the excisions and the tedious and time-wasting poultices of our student days.

CACHEXIA STRUMIPRIVA.

As the result of numerous observations on dogs, a consensus of opinion is in favor of the existence and relationship between the thyroid gland and the sexual organs, and that extirpation of these organs considerably modifies the cachexia, especially if the spleen had previously been extirpated; but SCIOLLA insists that extirpation of the thyroid always, in dogs, lead to tetanic death, which is not prevented by previous removal of the spleen; as the blood, like the other tissues, directly suffers from the intoxication due to the absence of the thyroid, which is not necessarily a homöopæstic gland. MARAGLIANO found a diminution of the red-cells and a certain degree of leucocytosis, but both ALBERTONI and TIRRONI note the feeble power of the blood of fixing oxygen under these conditions; but while they admit the probability of this want of fixing power as due to alteration in the pulmonary epithelium after thyroidectomy, other writers maintain that there is no real alteration in the blood, and that the thyroid gland has no hematogenic functions.

OPIUM IN EPILEPSY.

THOUGH opium can scarce be regarded as a specific in the treatment of epilepsy, still Dr. JOSEPH COLLINS contends that it is an important adjuvant, that acting symptomatically, it prepares the way for and enhances the value of other an insipid measures. He advocates its use as particularly valuable in old or intractable cases, but he does not regard it in recent cases of idiopathic epilepsy. He more the treatment by giving three grains of opium (in $\frac{1}{2}$ to 1 gougars of α) every day for the first week, doubles the daily ever-enlarging very weak till the patient reaches 8 grains per α and be well gro α grains of bromide of potassium four times

The specialism system of treatment he claims (1) cessation of the lesser time, (2) the frequency of the but it exists as an α after treatment is lessened by more practice of medicine though relapse may occur in a period of which the eye is so α has been accustomed to having. mesocope so type and faithful.

OUR PICTURE GALLERY.

SURGEON GENERAL SIR WILLIAM JAMES MOORE.

K.C.I.R., M.R.C.S. Eng., L.R.C.P. Edin.,

L.S.A. Lond., F.M.S.

Honorary Physician to the Queen.

WILLIAM JAMES MOORE, born in 1828 at Hales-Owen Worcestershire, is the son of the late EDWARD MOORE, Esquire, Deputy Lieutenant and Magistrate for the county of Worcester and an old and respected medical practitioner. Sir WILLIAM was thus at an early age habituated to medical and surgical practice, as conducted in those days when bleeding had not gone out of fashion, and when microbes were unknown. He attended his lectures and hospital practice at the Birmingham Medical School, and immediately on obtaining the diplomas of the College of Surgeons and Apothecaries' Hall, then almost the summit of the student's ambition, he was appointed House Surgeon to the Queen's Hospital at Birmingham, in which capacity he remained for three years, taking also the diploma of the College of Physicians of Edinburgh.

Not caring to take his father's large and laborious county practice, in 1852 he entered the Bombay Medical Department, going to India with some little reputation as the winner of the prize offered by the Provincial (now British) Medical Association for the best series of surgical cases with comments published in the *Journal*. Also with a large amount of practical professional knowledge derived from his father's practice, and from his long residence in the Queen's Hospital; which knowledge afterwards proved of invaluable service to him.

On arrival in Bombay his desire was to be attached to the College and Hospital there, but he was first sent to serve with the Artillery in the Deccan and afterwards to serve with the Cavalry and Infantry on what was then called the Rajpootana Field Force at Neemuch and Nusseerabad. After some years in these then little known stations, he was ordered for service in the Indian Navy, to which, in those days, all the Bombay medical officers were liable. He served in a naval capacity, chiefly in the Persian Gulf and Red Sea for nearly two years and a-half, and was present with the Persian expeditionary force, for which he received the medal and clasp. While in the Persian Gulf, he published an account of the climate and of the principal diseases prevalent there, which at the time attracted some attention. While he was in Persia, the mutinies broke out, and his next appointment was medical officer to the Kutch Levy, a regiment formed hastily during the mutinies and disbanded immediately afterwards. While in Kutch, he wrote a description of the Runn of Kutch and of the province generally. He then received the appointment of medical officer to the European Sanitarium at Mount Abo; and while there, wrote a full description of this mountain resort, and also published his work entitled "Health in the Tropics or Sanitary Art applied to Europeans in India," and the first edition of a "Manual of the Diseases of India." On his term at the Sanitarium expiring, he was appointed medical officer to the Marwar Political Agency with headquarters at Jodhpur. Having become well acquainted with the Marwar State, he published an article "Marwar the Land of Death." For a short



Yours truly
W. J. Moore

time he was transferred as Acting Resident Surgeon of the European General Hospital, Bombay, where he introduced the practice of the subcutaneous injection of quinine. From the records of the hospital, he obtained statistics showing the relation of hepatic abscess and dysentery, which have been frequently quoted. From the Marwar Political Agency he was transferred to the Rajpootana Political Agency, and became Superintendent-General of Dispensaries and Vaccination for the province of Rajpootana. In this responsible position he travelled annually through the greater part of Rajpootana, becoming intimately acquainted with the people. As a result, he contributed an article on native medical practice in Rajpootana, and also a report on the use of opium on that district. For his conduct of the medical institutions of the province he frequently received the thanks of the local authorities and also of the Government of India in the Foreign Department. He was in Rajpootana during the famine years, writing a report on the famine in the different states, which was published in the *Gazette*. He also wrote for the *Calcutta Review* a paper on sanitary progress in India, and contributed various articles to the *Medical Gazette*, and other periodicals on Madura foot, malaria fevers, the Eurasian future, and other subjects. On leaving Rajpootana he was made a C. I. E. and Honorary Surgeon to the Viceroy. His next office was that of Deputy Surgeon General of the Presidency Division, Bombay and Aden. He occupied his little leisure by publishing a book "The other side of the Opium Question" and another "Health Resorts for Tropical Invalids," and a second edition of his "Manual of the Diseases of India." On the termination of his five years' service as Deputy Surgeon-General, he returned to England for a time, until re-called to assume the high post of Surgeon-General with the Government of Bombay. On his final retirement, after more than 35 years in the service, the members thereof subscribed for his portrait, the remainder of the money collected being devoted to scholarships for the hospital assistant class, in whom SIR WILLIAM had always taken the greatest interest, regarding them as the worst paid and hardest worked of Government servants. It must also be mentioned that he is the author of "The Manual of Family Medicine and Hygiene for India." The origin of this work was the offer of a prize by the Government of India for a manual suitable for the numerous individual families and office establishments then (before railways were so numerous) scattered over India in positions more or less remote from medical and surgical aid. This work has now reached the sixth edition. On leaving the service he was made a K. C. I. E. and Honorary Physician to the Queen.

Since then, at the request of the Government of Bombay, he wrote the "Immediate treatment of accidents and injuries" for translations into the vernaculars. Also a work "The Constitutional Requirements for Tropical Climates," also an elaborate essay "The Progress of Sanitation in India," published in the Indian volume of the transactions of the International Congress of Hygiene and Demography. Recently he was made Honorary President of the Tropical Section of the Congress at Budapest, contributing a paper on "Tropical Dietetics." DR. MOORE represents the Bombay branch of the British Medical Association on the Council of that body.

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1st January, 1895.

THE INDIAN MEDICAL CONGRESS.

THE first Indian Medical Congress, held in Calcutta, was opened on the 24th December 1894. LORD ELGIN, our Viceroy, and SIR CHARLES ELLIOTT, the Lieutenant-Governor of Bengal, graced the inaugural ceremony with their presence. The large hall of St. Xavier's College was crowded with doctors and leading citizens. The local profession mustered fairly, and the officers of the Indian Medical Service were in great force. Altogether the spectacle was an imposing one, and nothing seemed wanting to make the inauguration of the Medical Congress a brilliant success—for such it really was. LORD ELGIN opened the proceedings with a speech, which followed by the address of SIR CHARLES ELLIOTT, plainly shewed that the Government of India and that of Bengal were both firmly imbued with the importance of such a gathering as this Congress of doctors, and that the authorities in India fully realised the benefits that can and should accrue to this country by the discussion of such a subject as preventive medicine in its varied relations to tropical disease. Both these gentlemen acquitted themselves with excellent taste and ability, proving that the State in India is prepared to do its duty in all that concerns the health of its subjects in this Empire. The address of SURGEON-COLONEL HARVEY, which we reproduce elsewhere, was an exhaustive, masterly and well-considered presentation in most of its aspects. DR. HARVEY's review of the development of medical work, medical education and sanitation in India, is highly interesting and instructive. The solution of the great problem of financing hygienic reform in India was met by his suggesting a tax of one anna per head of the population, which would yield so large a "Sanitary Fund" as Rs. 13,000,000! DR. HARVEY did not tell us the cost of collecting this tax and assessing the balance. It is an easy matter to do a sum in simple multiplication and division, but we ought to reckon a little for subtraction also, and we fear the "little" in this instance would greatly reduce the thirteen millions. We have also to consider the fact that India's millions are so poor that it would be hard to find 40 per cent. of the masses able to afford two pice or half an anna through the long wearisome toiling 365 days of any year of their poverty-stricken lives, to pay even this small tax of "three farthings" which DR. HARVEY suggests. DR. HARVEY's prophecy of a "Sanitary Eden" for India may well be considered an "airy nothing," for India will have to be worked at half its present cost for the up-keep of official extravagance before one step can be taken in solving the financial aspect of this great sanitary problem. It was extremely pleasing to hear DR. HARVEY give expression to his feelings of sympathy with the local profession, and we believe these to be genuine. But DR. HARVEY could not escape from the temptation of claiming a monopoly of "Government hospitals for Government servants," nor indeed could he divert his "official" mind for a few brief

moments of the glamour that surrounds the "Service" of its self-declared superiority and exclusiveness. To harangue a mixed assemblage of private practitioners and local graduates on the subject of an OPEN AND EQUAL TERMS OF COMPETITION for the Indian Medical Service held in London and on the exceptional fitness of such a state of things, since the system involved the "getting of the best men" was altogether out of form, and in very questionable taste before an audience that was largely Indian, especially when it is all but too well known that competition to the Indian in England is a very different thing in the great matter of expense, when compared to the Englishman who simply crosses the street to enter the examination hall. It is hardly just to call such a competitive test a fair one, when it is remembered that a strong prejudice exists in London against admitting Indians into the Indian Medical Service, and it is a fact that they are excluded. It is one thing to have an honest law, it is quite another thing to obey it honestly. Let the examiners in London answer this oft-repeated charge made against them. Under any circumstances the cost of proceeding to England to compete in such an examination robs the system of all its fairness to Indians.

The sop offered to Cerberus in the opening of a hospital in Calcutta to be officered by non-officials is said to be an evidence of the desire on the part of Government to do justice to local practitioners. We fail to see it. The hospitals of Calcutta are *not* Government hospitals. They were built from funds raised by *private* benevolence for the poor and the PUBLIC COFFERS provided a portion. Has the Government of the country become so autocratic and despotic as to claim all public hospitals as its own property and to deny the public voice of the people of the country any share in their management and control? Who are Government officials but the servants of the people. Yet in India we are made to feel that India has to be governed for officials by officials. Hence it is possible for an official to defy public sentiment and crush the aspirations of the people of the soil by such utterances as Dr. HARVEY's, regarding the perpetuation of the monopoly of civil hospital appointments by *military* officers. We shall have more to say on this subject later on, and so we pass to more congenial topics. Surgeon-Colonel HARVEY's clever handling of vital and economic statistics was quite a feature in his address, while the general tenor and literary style of his remarks called forth the acclamations of his distinguished audience. But for the controversial element so unhappily thrown in and the tendency to shew up the failings—few and far between as Dr. HARVEY was compelled to admit—of the local profession, which detracted from the freely urged expressions of sympathy with our brethren outside the higher services in India, we feel certain that Dr. HARVEY's address will be read with interest and profit all over India.

Dr. ERNEST HART, the well-known and talented editor of the *British Medical Journal*, seconded the vote of thanks to the Viceroy in an excellent little speech. His mission in India is to spread the knowledge of hygiene and to make a strong effort to convince the people of India that cholera and fever are both propagated by impure water, and that both these scourges can be prevented

by a pure water-supply. We feel sure that Dr. HART will be cordially welcomed everywhere in his tour throughout India, and we wish him for India's sake, the fullest measure of success in his noble mission. The programme of the Congress is a heavy one. In the section of Medicine 39 papers were read, in Surgery 19, in Obstetrics 14, in Pharmacology and Indigenous Drugs 16, in medico-legal Medicine and Public Health 10, or in all 98 papers. It is believed that nearly 200 papers were submitted to the Congress, and it is quite possible that many of those that were unread at the sections will be printed and published in book form by the Congress Committee. We are not aware whether the privilege of publishing these papers will be confined to the Official Report of the Congress Transactions, but we feel sure that if they are handed over to one medical journal to publish, they ought to be given to *all*. The tendency of the Congress Committee to favor cliques has been markedly and regretably strong and so was their blameable inconsistency and meanness in trying to pay off old scores, a feature which was carried to a most lamentable degree of personality. We shall have more to say by and bye on this matter, but for the present we shall wait the development of the next phase of this question in the favoritism shewn in the publication of papers. We present in this number the address of the President of the Congress and the Presidential addresses for the sections of Medicine, Surgery, and Ophthalmology, and we hope to publish other sectional addresses and papers in coming issues.

The sectional address published are all highly interesting. Recreation and amusement were not left out of the programme of the Congress. The various outings for members were much enjoyed and the entertainments given by the President, Surgeon-Colonel HARVEY, at the Town Hall and by RAI BAHADUR LAL MADHAB MUKERJI, the President of the Indian Medical Association, and by Dr. JOGENDRO NATH GHOSH, were very successful.

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THE CAUSE OF ENTERIC FEVER IN THE BRITISH ARMY IN INDIA.

COMMENTING on the article in our issue of the 16th October last on the cause of enteric fever in the British army in India, in which we suggested that the defective personal hygiene of the British soldier may explain the extraordinary difference between the liability of the European and that of the native soldier to enteric fever, *The Statesman* remarks that "there may be something in this but not enough, we suspect, to account for the facts. Valuable light would be thrown on the point, by a comparison of the liability of European soldiers to the disease with that of European officers of the same age, who practise ablution as frequently and are as careful about their teeth as the sepoy. If, as we suspect would be the case, it were found that the officer is little, if at all, less liable than the soldier, the theory that personal hygiene is the chief factor would be disposed of." We thank our contemporary for having raised this issue. We do not think that it is quite necessary, however, to consider how the disease affects European officers and European soldiers of the same age. In considering whether or not personal hygiene plays a part in the causation of enteric fever

it should, we think, render our first article in this connection satisfactorily conclusive or lend material support to our theory if statistics show that European officers in general are very much less liable to the disease than are European soldiers in general. Acclimatisation and susceptibility, it is generally conceded, afford one explanation of the marked disparity in the number of cases of enteric occurring in the European and native armies. Personal hygiene, we have suggested, affords another explanation of that disparity in numbers.

Considering then these three factors non-acclimatisation, susceptibility, and defective personal hygiene in the etiology of enteric fever, if it be shewn that the European soldier, in whom all these causes operate, is extraordinarily more liable to the disease than the native soldier, in whom all these causes are more or less absent, and who is more or less immune to the disease; and if it be further shewn that the European officer, in whom non-acclimatisation and susceptibility only operate, is much more affected by the disease than the native soldier and much less affected than the European soldier, then the part played by acclimatisation and susceptibility in the causation of enteric is represented by the extent to which the European officer is more affected by the disease than the native soldier is, while the difference between the liability to the disease of the European soldier and of the European officer, represents the importance of personal hygiene in reference to the etiology of the disease. In order then to give support to our suggestion that personal hygiene forms an important factor in causing enteric fever, all that it becomes necessary for us to shew is that there is a wide difference in the extent to which European soldiers and European officers are affected by typhoid fever. As the Sanitary Reports for the years 1891 and 1892 (on the figures furnished by which our previous article was based) do not give the number of cases of enteric among European officers of the Army in India, we had to make application for this information; and we are indebted to the courtesy of the Statistical Officer with the Government of India for the following table:—

Statement showing the number of admissions from enteric fever among the officers of Her Majesty's British and Indian Armies during the years 1891 and 1892.

| | Bengal. | | Madras. | | Bombay. | | Hyderabad. | | India, Contingent. | |
|------------|---------|-------|---------|-------|---------|-------|------------|-------|--------------------|-------|
| | 1891. | 1892. | 1891. | 1892. | 1891. | 1892. | 1891. | 1892. | 1891. | 1892. |
| British .. | 35 | 41 | 10 | 6 | 6 | 8 | .. | .. | 51 | 55 |
| Indian .. | 6 | 9 | 2 | 3 | 3 | .. | .. | .. | 11 | 11 |

The reports of the Sanitary Commissioner with Government shew that the total number of officers of the British and Indian Armies was 6,204 in 1892, and 6,391 in 1891; so that the sixty-six and sixty-two cases of enteric fever recorded for those years, represent 10·63 and 9·70 per mille of strength. Hence the number of cases has been:—

- Among Native Soldiers, 0·4 per mille of strength in 1892.
0·3 per mille of strength in 1891.
- Among European Officers, 10·63 per mille of strength in 1892.
9·70 per mille of strength in 1891.
- Among European Soldiers, 20·1 per mille of strength in 1892.
20·4 per mille of strength in 1891.

This, we think, points to a well marked difference in the liability to enteric disease, between European soldiers

and European officers, and makes our suggested factor in the causation of the affection viz., personal hygiene, a matter worthy of the consideration of military medical authorities. We quite admit the marked predisposition of the European to typhoid infection. In our last article we said that this "may be accepted as authentically established." There must, however be one or more other causes to account for this enormous disparity in the number of cases occurring in the European and Native Armies in India, and from a knowledge of existing circumstances, it struck us that there may be a relation between defective personal hygiene and enteric prevalence; and the figures which, on the suggestion of the *Seafarer*, we have been able to give in relation to typhoid fever among European officers, adds another circumstance to those we mentioned in our previous article in support of our theory. There may, of course, be other causes to explain the disparity, but we are inclined to regard defective personal hygiene as an important, if not the most important, existing factor to account for this difference. We expressed a very similar opinion in writing on this subject in our issue of 1st October 1892 and although we have noted with special interest and without prejudice, and have given to our readers as freely as we could, whatever may explain the fact of enteric fever becoming the scourge of the European Army of the country, we have had no reason to change that opinion. As yet the profession is only able to opine on this subject of the cause of enteric fever in the British Army in India, it is in search of light, and everything that can be reasonably advanced either in support or disproof of existing theories ought to be welcomed by the profession.

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THE POSITION AND PROSPECTS OF THE MEDICAL PROFESSION IN INDIA.

We have from time to time referred to the position and prospects of medical men in general, their social status and their influence on society. We now propose to enter upon a consideration of all such matters in reference to the profession in India. There are permitted to remain in operation in this country, a series of evil influences which are altogether unknown, and which would scarcely be tolerated, beyond the limits of our peninsula—a series of regulations prejudicial to the profession, which make the lot of its members a hard and difficult one, and their prospects very gloomy indeed. It is not our desire to paint a mournful picture for the feminine or puerile gratification of evoking a sigh of commiseration for the local profession; but we feel it our duty to honestly defend our local brethren against a conservatism or blinding prejudice which stems their progress and bars and mars their social and professional advancement. The disadvantages under which local medical talent and private practitioners in India are placed, do not arise only from existing rules being very faulty, but also from the want of certain regulations.

We think that one of the most serious drawbacks to the proper recognition of the medical profession in this country is the want of an Act enforcing registration of all who are considered qualified to practice medicine, surgery and obstetrics, and in adequate and deterrent punishment not being

meted out to unqualified frauds. It is not only ruinous to practitioners, but absolutely degrading to the healing art to witness the unrestricted leniency with which those who are so disposed, are permitted to dabble in medicine. We need not remind our readers how easy it is for self-constituted vaids and hakims to spring up, and how unrestrictedly they are allowed to play with human pain and life. It is as easy and as common now-a-days to find individuals from the mere fact of having seen and smelt a few drugs in a sixth rate chemist's establishment for a few months or even weeks, posing as orthodox dispensers of medical relief. Unless then there be a distinct line of demarcation, such as registration under a Medical Act will provide, separating qualified practitioners from medical dupes, the profession must suffer in dignity as well as socially and pecuniarily.

The second disadvantage is that *all the medical services recruited locally are subordinate.* Let the perseverance, intelligence, and merit of these officers be what it may, they cannot hope to rise to the higher services.

"All ye who enter here abandon all hope of rising to higher or nobler things," is written in indelible characters on the portals of the subordinate medical services of India. Could there, we ask, be anything more disheartening to individuals and more destructive of ardour and improvement than this positive suppression of merit and ability? To be educated in India stamps one, *per se* in the official mind, as inferior. This is surely what our universities and colleges should resent as casting a reflection on their degrees and training. In the judicial, educational, and engineering services, locally educated men of mark may rise to the highest grades, whereas an English qualification is a *sine qua non* for admission into the higher ranks of the medical services, and even with such a qualification the subordinate cannot hope to be advanced to the higher rungs of the official ladder. A medical servant of the State should be permitted to rise *by dint of merit* from the lowest to the highest grades and ranks of the medical services. We hold that a certain number of Civil Surgeoncies and Army Commissions should be reserved annually for the more deserving Civil and Military subordinates. Some such concession as this would rob the present system of enforced residence in England for Indians and Anglo-Indians before "competition" is possible, of a fraction of its absolute unfairness and hardship to the people of India. We would strongly commend this suggestion to the higher authorities.

Thirdly.—There is the *total exclusion* of locally educated men and private practitioners from the higher teaching and public hospital appointments in India. This renders it absolutely impossible for them to rise to any eminence in the profession, or to become men of note. This discouragement of local talent is certainly absent in other educational branches, where the professional staffs are as worthily represented by locally educated men as they are by any others. Is it then one of India's weaknesses that she can turn out worthy professor of every subject except those included in a medical curriculum? This surely cannot be conceded; and one is naturally forced to assign less commendable reasons for this handicapping of local medical talent.

Fourthly.—Private practitioners in the country are very seriously *handicapped by the competition of official surgeons* whose State salaries make them regardless of fees and enable them to dispense advice gratuitously, while others again accept low fees which private practitioners ordinarily accept as their charges. The only alternative left to the private practitioner is to descend to a lower level of charges which scarcely compensate him for the worries and self-sacrifices which a practice involves. Government surgeons should be made to fix their fee at a sovereign or a gold-mohur per visit, and should not be permitted to take up the position of advisers to private trading and insurance companies, or to enter into any contract or annual arrangement for medical attendance on families. This rule gives the private practitioner a fairer and a more open field.

Fifthly.—The *disparagement of private practitioners by Government* in its refusing to accept the certificates of health or ill-health granted to Government servants by practitioners, and in its insistence on such certificates bearing the signature or counter-signature of a Government surgeon is a very bad feature. Such a regulation certainly does not raise a practitioner in public estimation, and bespeaks some distrust in his capacity or honesty. With a Registration Act, and with the understanding that certificates of such practitioners only who are registered under the Act will be accepted by Government, while improper or unprofessional conduct will be met by removal of a practitioner's name from the Register, the interest of the Government will be sufficiently protected against the vagaries which, it must be inferred from present rulings, Government fear may be perpetrated by private practitioners, and of which its officials are considered incapable of committing.

Sixthly.—The profession in India is more or less ignored by the *exclusion of private practitioners from any form of State decoration or honor*, such as Honorary Physicianships and Surgeoncies to the Queen as are bestowed on private physicians in England, and the Honorary Surgeoncies and Assistant Surgeoncies to the Viceroy as given in India to service men. Anglo-Indians and Indians on whom these honors have been conferred are or were in the service of the State. The distinctions then may be regarded as rewards for *official labors*. Professional merit has not been generally considered. The *profession* then has not been recognised or honored in these bestowals which are reserved for State appointments. If these decorations were from time to time given to meritorious private practitioners, the dignity and status of the profession in India would justly and advantageously be raised.

EUCALYPTUS IN ACUTE CORYZA.

DR. GRIAZNOFF says that the inhalation of eucalyptus affords the best means for cutting short an acute attack of cold in the head, provided treatment is early—that is, as soon as sneezing and watery discharge appear. The patient should tie a knot in his handkerchief, freely moisten it with eucalyptus, and then energetically inhale until the symptoms disappear completely. When the inhalation is resorted to within an hour or so after the first symptoms, the affection is usually cut short in from ten to thirty minutes. For those persons who dislike the odor of eucalyptus, add one-third peppermint oil, which increases the rapidity of the "cure." In children, several drops of the mixture should be sprinkled over the pillow.—*Novosti Terapii.*

COMMENTS AND NEWS.

RECRUITING FOR THE WARRANT MEDICAL SERVICES.

ONE of the features characteristic of the Eurasian and Anglo-India Association of Southern India appears to us to be its business activity. The Association does not merely exist, but lives a life of activity and usefulness, and it is imbued with a determination to avail itself of every circumstance which will benefit the community it represents. The suggestion, in our issue of 1st September 1893, that it was the duty of the Association to prevent manufactured Eurasians entering the Warrant Medical Service in opposition to para. 268, A. R. L. Vol. VI., was followed by a successful appeal by the Association to the Surgeon-General with the Government of Madras, soliciting that satisfactory proof of parentage be furnished by candidates; and now that parties have reason to believe that one of the candidates recently entertained has obtained admission into the service by misrepresenting his nationality, a Sub-Committee at their meeting of 5th December last have resolved to bring the matter to the notice of the Surgeon-General of the Presidency. We are glad to find that the Association does not waste time in vain talk and useless threats, but strikes directly at an evil. We do not decry the value and merit of the Indian, but rules are made to be observed and not to be broken, and an Association which recognises that a breach of any existing rules robs the community which it represents of any advantage, is to be congratulated in actively opposing such infringement of regulations. The present Surgeon-General with the Government of Madras is of the *smarter in modo fortiter in re* type; and he will not look unconcernedly on any violation of Government orders. We have no doubt but that if the candidate in question or any other is proved to have entered the service under false colors, he will be dealt with as he should be. All those interested in the Warrant Medical Service of their Presidency and in the Eurasian and Anglo-Indian community, should bring to the notice of their respective Associations all such who, since 1872, the year from which the Warrant Medical Services have been closed to Indians, have procured admission into the Services by representing themselves to be Eurasians. The Madras Association shews fully its willingness to take proper action in such matters. As we wrote in our issue of the 1st May last, "such exposure will not be an injustice to the victim; on the other hand, it would be a just and proper act, for justice does not shield delusion, but demands its prevention and exposure. The victim of such exposure is not deprived of what is his, but of what he has become possessed of by misrepresentation," and by depriving a fellow-subject of his State-sanctioned privilege. We think that the Surgeon-General of each Presidency should issue a circular in his command, intimating that as it has been brought to notice that individuals have procured admission into the Warrant Medical Service by wilfully misrepresenting their nationality in opposition to the condition that candidates for admission into such services must be of European or Eurasian parentage, as clearly set forth in the *Gazette* notifications, the Surgeon-General calls upon those who have entered the service under such misrepresentation to submit their resignations forthwith, and thereby to prevent their dismissal being gazetted on the Surgeon-General being made cognisant of their parentage as other than European or Eurasian. As a punishment for having deceived Government into the expense which their medical training has entailed, these individuals should be declared ineligible for further Government employ for as we said in our article of the 1st September 1893, an exemplary "exorcise of its rights by

Government in bringing to book one or two who can be clearly proved to have ridden rough-shod over its rules, will be the most effective way of checking any further infringement of its regulations."

A PHYSICIAN'S "AT HOME."

ON Wednesday, 26th December 1894, DR. LAL MADHUS MUKERJI, Rai Bahadur, gave an evening party to the medical profession, and SIR CHARLES ELLIOTT, the Lieutenant-Governor of Bengal, attended by special invitation to meet the doctors who are in full force in the city at the present time. Among the guests were the *élite* of Calcutta, including Indian noblemen and princes from all parts of India. Nearly 300 gentlemen were present. The street was decorated with bunting, and at both entrances triumphal arches were erected. DR. MUKERJI's palatial residence was beautifully illuminated, and the internal arrangements for the comfort of his distinguished guests were both luxurious and in exquisite taste. SIR CHARLES ELLIOTT spent some time in conversing with his host and with many of the guests, among whom were the Hon. MR. COTTON, the Hon. MR. C. E. BUCKLAND, DR. ERNEST HART, Surgeon Colonels HARVEY, LETHBRIDGE, LAWRIE, BOMFORD, CROMBIE, and many doctors from the Congress, both European and Indian, SIR JOTENDRO MOHAN TAGORE, PRINCE SIR JEHAN KADIR MIRZA, PRINCE BUNTEAR SHAH, SIR BHAGWAT SINGHI, Thakore of Gondal, NAWAR AGGAR ALI, the Hon. Justice GURU DAS BANERJI, and many leading physicians and general practitioners of this city, besides many well-known citizens. An excellent programme of music, jugglery, legerdemain, thought-reading, and ventriloquism was provided. The whole performance was most skilfully conducted. After refreshments were partaken, the guests dispersed, carrying with them the pleasantest recollections of DR. LAL MADHUS MUKERJI's hospitality. DR. MUKERJI, besides occupying a high position as an ophthalmic surgeon and as Principal of the Calcutta Medical School, is also President of the Indian Medical Association. The Lieutenant-Governor, in accepting DR. MUKERJI's invitation, paid him and the local profession a special compliment, for it is the first instance in which any Governor of Bengal has accepted of the hospitality of an Indian physician.

SURGEON-COLONEL HOOPER AND THE MEDICAL BOARD OF THE INDIA OFFICE.

THE Government *Gazette*, N.-W. P. and Oudh, of Saturday last, contains the following appreciative and well-merited official recognition of the services of DR. W. R. HOOPER:—"In connection with the approaching retirement from the service of Brigade-Surgeon Lieutenant-Colonel W. R. HOOPER, Civil Surgeon of Lucknow, His Honour the Lieutenant-Governor and Chief Commissioner desires to place on record his appreciation of the excellent and devoted services rendered by that officer to the Government of these provinces for a period which extends back to June 1861, when he entered civil employment.

After eleven years' good service in the Jail Department as Superintendent of the Central Prisons of Allahabad and Benares, he was, in September 1874, placed in medical charge of the important station and district of Benares, where the magnificent Prince of Wales' Hospital is a monument of his untiring energy in charitable medical work, as well as of his personal popularity.

In August 1891, as a reward for long and approved service, he was transferred to the Civil Surgeoncy of Lucknow, where he not only earned the approval of the Government, but gained the confidence and affection of all classes of the European and Native communities.

In 1881 he received the thanks of His Excellency the Viceroy and Governor-General of India, and between 1878

and 1893, on eight separate occasions, those of the Government of these Provinces, for the working of the hospitals and other medical institutions under his charge, and throughout a long career he has well upheld the high character of the service to which he belongs.

THE DOCTOR'S WIFE.

THE doctor's wife is an important factor in his success or failure. So thinks the *American Lunnet*. Where the wife takes a pride and active interest in her husband's work there will be success; but where she is, all complaint about being left alone and not content to share the life of the busy doctor, or to put up with its disadvantages there will be failure. DR. E. C. VALENTINE, in support of this opinion, tells a tale which we may reproduce in brief: He called to see a colleague. The latter was not at home, but his wife welcomed him, and asked his attention to a man she had on the operating table with his posterior tibial cut. She had controlled the bleeding with a neatly applied improvised tourniquet, but was afraid to attempt ligation. Just then the husband returned. She helped him proudly in ligating the vessel, and then patted him approvingly on the cheek. 'But dearest,' said the husband, noticing the soiled matinee and her blood-stained dress, 'you have lost the matinee in consequence, and your new dress is ruined.' Her proud and affectionate rejoinder was: 'What is a matinee or a new dress to seeing a good operation performed by a good surgeon, and that surgeon my husband!' Whether the husband pressed her in a strong embrace and rewarded her with kisses after the novel and romance fashion, or whether he experienced a feeling of dread or depression at thoughts of weighty shop-bills, the narration sayeth not. But with such a sympathetic and practical help-mate a practitioner should succeed.

THE CONSULTANT, THE PRACTITIONER AND THE PATIENT.

ALTHOUGH it is the rule and the tradition of the profession that a consultant should advise a patient only through and conjointly with his regular medical attendant, the rule is not uncommonly ignored. The *Lancet* considers that PERCIVAL's statement "Of the conduct of physicians towards apothecaries" represents the claims of the man who is in regular attendance to the consideration of the consultant; and as the regular medical attendant is acquainted with the hereditary constitution, habits, peculiarities of the patient, &c., he is able to furnish valuable information. A furtive consultation then may be unjust to the regular attendant, injurious to the patient, and prejudicial to the interests of the consultant himself. The consultant who spurns the help of the regular medical attendant and endeavours to form an opinion in fifteen or twenty minutes on complicated facts, incurs a heavy responsibility and does not secure himself against error; and though a patient may be entitled to any number of independent opinions, he is likely to find himself very unhappy in his multiplication of them; and he should not receive countenance in such folly from the consultant who should always co-operate with the ordinary medical attendant.

THE HARD LOT OF CIVIL ASSISTANT SURGEONS.

THE present want of consideration for the hard lot of Civil Assistant Surgeons is said by the *Times of India* to be regrettable. Although wages depend upon competition, and there are more lawyers than doctors, yet a pleader may rise from a manship to the exalted benches of the High Court, while an Assistant Surgeon starts life on the miserable pittance of rupees one hundred and has no better prospect than of rising to rupees two hundred after a life time of service. The salary of Rs. 400 asked for by them is considered

reasonable, considering the general services rendered. Surgeons are called upon to perform all manner of work, generally recognised and conceded that this class of medical officers have substantial cause for dissatisfaction, and this is indeed a great point gained towards a satisfactory settlement of their case. It is the first and most important step towards obtaining redress; for this being once admitted by a Government whose watchword may be said to be "Justice," we may be full of hope that redress will soon follow.

DR. HARVEY'S CONVERSAZIONE.

THE President of the Congress and his amiable wife, entertained the members of the Congress at a conversation in the Calcutta Town Hall, on Friday evening, the 28th December 1894. Colonel and MRS. HARVEY received their guests, and by the time LORD and LADY ELGIN entered the Hall, it was filled with ladies and gentlemen, a large and distinguished gathering including not only members and delegates of the Congress, but civil and military officers and leading residents of the city. The Town Hall was well illuminated and the decorations with bunting, ever-greens and plants were very pretty and effective. A military band supplied a good programme of music. Here and there scientific apparatus, including microscopes fitted with specimens, preserved flowers, electrical and chemical appliances, the phonograph, &c., afforded much pleasure and interest, while the guests promenaded the Hall conversing with each other. Tables laden with refreshments were lavishly provided. The gathering dispersed at 11 P.M., and all who were present will heartily accord to Surgeon-Colonel and Mrs. ROBERT HARVEY their best thanks for their genial reception of their guests and the enjoyable entertainment that was so kindly provided for them.

HONOR TO CIVIL ASSISTANT SURGEONS.

WE are glad to hear that Assistant Surgeon Chetan Shah, Khan Bahadur, Bhagwan Das, Fateh Chand, M.B., and Mehr Chand, Rai Bahadur, have been recommended for appointments in the Uncovenanted Medical Service. All of them are men of distinguished and meritorious service in the Punjab. Dr. Chetan Shah, Khan Bahadur, (Honorary Assistant Surgeon to H. E. the Viceroy) has been officiating as Civil Surgeon since 1874, and is the author of several medical works. Dr. Bhagwan Dass has been officiating as Civil Surgeon since 1882. Dr. Fateh Chand, M.B., M.S., after serving for nine years in the Department, went to England for further qualification and distinguished himself at the Durham University. On his return in 1889 he was appointed to officiate as Civil Surgeon. Dr. Mehr Chand, Rai Bahadur, (Honorary Assistant Surgeon to H. E. the Viceroy) has officiated as Civil Surgeon several times since 1878. Only one Assistant Surgeon in the Punjab, Dr. Gokal Chand (in charge of the Secretariat establishment of the Government of India for several years and at present private medical adviser to H. H. the Maharajah of Patiala) has been appointed to the Uncovenanted Medical Service.

We heartily commend this system of promotion to other local governments.

BRIBES TO MEDICAL MEN.

THE *British Medical Journal* sounds a warning note to medical men cautioning them of the coaxing wiles of patent medicine originators and the makers of new brands of wine and things of that ilk, advising them to refuse presents when accompanied by the offer of "a case of half a dozen or so for your own use free of charge and carriage paid, and we trust that after tasting it you will kindly see your way to recommending the champagne, &c., to your patients." The General Medical Council of Great Britain is on the alert and intends to deal severely with medical men who are rash enough to swallow such baits as the above and append their signatures to certificates praising perhaps worthless stuff.

HOW LONGEVITY IS OBTAINED.

THOSE who have gone to comparative strength and vigour far beyond the limit of the allotted span of human existence have assigned their longevity to very different causes. *The British Medical Journal* says that M. BARTHELEMY SAINT-HILLARE, a French scholar and politician, who recently entered on his 90th year full of physical and intellectual vigour, thinks that adherence to the old precept "early to bed and early to rise" with steady work during waking hours is the secret of long life. With MR. GLADSTONE the secret is a daily walk in all weathers, and giving thirty-two bites to every morsel of food; with OLIVER WENDELL HOLMES it was equability of temperature; DR. P. H. VANDER WEYDE, an American Octogenarian, ascribed it in himself to the benign influence of the study and practice of music. One old lady, aged 120, ascribes her longevity to single blessedness and M. FERDINAND DE LESSEPS to horse-riding. The assigned cause with some old people is directly opposed to that assigned by others, being with some abstinence from and with others indulgence in alcohol, tobacco, meat, &c. Our contemporary puts the whole secret in a nutshell when he says that "it is a sound constitution prudently husbanded."

CHEAP DOCTORING.

DR. MARTIN of Sheffield, speaking on medical ethics lately, loudly and strongly denounces cheap doctoring. For one to give advice and medicine for sixpence a visit is an evil and a wrong to the honorable portion of the profession, and it would be regarded as a disgrace to have anything to do with those who thus cheaply dispense advice and drugs. Still more does he decry the action of medical men engaging themselves with medical aid insurance societies. Such men are said by DR. MARTIN to be selling their birth-rights for a mess of pottage, and cannot have the smallest conception of the honorable character of their profession. Parties joining these societies are able to pay a medical man properly, and have no right to accept medical services for nothing or for insufficient remuneration. It is the duty therefore of the profession to stand together and see that they are not wronged in this respect. DR. MARTIN hopes that before long the powers of the Medical Council will be sufficiently enlarged to enable it to suppress all dishonorable practices in the profession.

A SUCCESSFUL ANGLO-INDIAN STUDENT.

LOYD ANDRIESEN is now a rising light in the medical profession. He is an Anglo-Indian and went to London to study medicine after gaining the Gilchrist Scholarship in India. He studied at University College, London, headed the list of the London University in the M. B. and M. S. degree, getting gold medals in both, and has now gained the highest medical degree—the M. D. of London. He has been appointed Superintendent of the Wakefield Lunatic Asylum in consequence of his special knowledge of mental diseases, and his writings in the London medical journals have already marked him out as a brilliant and promising physician. DR. ANDRIESEN'S career ought to inspire many of our Indian medical students to emulate his splendid example.

PAY HOSPITALS.

THE opposition to the attempt to introduce pay wards in the London Great Northern Central Hospital appears to be increasing. One member of the hospital staff has refused to submit to the system which expects the medical staff to give its services gratuitously in these wards, and a councillor who subscribed thirty guineas to the hospital threatens to ask for a refund of his subscription should the system of pay wards be permitted by the Committee, as he had given his money for the sick poor alone. We hope that the opposition will prove sufficiently strong to early abort the efforts of the Hospital Committee, and to thus deter other institutions from doing anything which will favor medical beneficence being taken undue advantage of.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

WE have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:—

- J. J. Brown, Asst. Surgeon, I. M. S., Station Hospital, Quetta.
- David Eikins, Asst. Surgeon, I. M. S., Station Hospital, Jullundur.
- C. S. Thirumadilawamy, Hospital Assistant, Civil Hospital, Madras.
- M. Ramamuni, C.M.S., Hospital Assistant, Civil Department, Port Blair.
- T. Ramchandram, C.M.S., Hospital Assistant, Civil Department, Port Blair.
- P. B. Sambuntha Mudelliar, Civil Apothecary, Conjeevaram.
- D. Robertson, Asst. Surgeon, I. M. S., Govt. House Dispensary, Ootacamund.
- Lakhmi Narain Chowdhuri, L.M.S., Asst. Surgeon, Hooshangabad, C. P.
- Jno. E. White, Asst. Surgeon, I. M. S., Station Hospital, Colaba, Bombay.
- George Morgan Dixon, L.M.S., Asst. Surgeon, Supdt. Sind Gang, Bahadipur, Karachi Dist.
- M. N. Mitra, L.M.S., Medical Officer, Dhalia Factory, Talup P. O., Dibrugarh.
- D. S. Ollenbach, Asst. Surgeon, I. M. S., Gunpowder Factory, Ichapur, 24-Pergunnahs.
- J. Fraser, Asst. Surgeon, I. M. S., Station Hospital, Nowshera, Punjab.
- Pandit Bishan Das, L.M.S., Asst. Surgeon, Chakwal, Punjab.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

EYE GLASSES OR OPERATION?

DR. R. H. SATTERLEE in a contemporary in whose columns he complains that the *phoria* craze has grown to such a pitch that conservative men meet with pitying smiles when they suggest that some cases of asthenopia *can* be relieved by proper glasses, asks "Is it time to call a halt?" If one eye sees as well as the other, and both are *equally* relieved of strain, the glasses are right, and in the majority of cases the muscles will adjust themselves; but unfortunately many victims are led to the altar of wholesale muscle-cutting, because many oculists are too indifferent about the *accurate* adjustment of glasses, and in many instances a weak myopic lens is given to the patient whether he be myopic or hyperopic, and this simply because the glass seems comfortable, and too little attention is paid to accurate refractive work.

'SUPPLY OF ANTI-TOXIN.

SIR JOSEPH LISTER has addressed a letter, calling upon the British public for subscriptions to enable the Institute of Preventive Medicine to manufacture on a large scale diphtheria anti-toxin, which he claims is harmless to either a healthy or a diphtheritic person, but is at the same time an almost infallible cure for the latter, if applied in the early stages of the disease. The prepared antidote will thus be placed within easy reach of every medical man, who will not only have a ready and effectual means of treating diphtheria, but also by subjecting his patient to no more pain than is occasioned by the hypodermic exhibition of morphia he will be able to render healthy persons attending on diphtheritic patients immune against an attack of the disease.

SHORT ITEMS.

In view of the fact, to which we recently called attention, that very large quantities of so-called "condensed milk," practically devoid of fat, are sold, it is of great importance to be able to rely on obtaining condensed milk containing its proper amount of fat, and not made with unwholesome sugars. We are able to recommend the ANGLO-SWISS COMPANY'S brands as being what they are represented to be, and as thoroughly reliable.

The first General Annual Meeting of the INDIAN MEDICAL ASSOCIATION took place at the Library and Office of the Association on Saturday 29th December 1894. Surgeon-Colonel Edward Lawrie presided. The ceremony of installing the Council, the address by the Chairman and the other parts of the programme were most successfully carried out. A full report will appear in our next number.

The undermentioned Military pupils having passed their final examination at the Grant Medical College, Bombay, are promoted to 3rd class Assistant Surgeons from the 17th of September 1894:—William Arthur Moore Wakeman, Michael Arthur Curry, Robert George Ives, Frederic Charles Henry Dady, Claude Cyril Kelly, and James Smith.

Before the introduction of vaccination, the mortality in Austria from small-pox was 62 per 100,000; in Prussia, 49. Since the introduction of vaccination, the mortality has been two cases in 700,000. In Germany, where re-vaccination is compulsory, the death rate is one patient in every 1,200,000.

Surgeon-Colonel Harvey, Inspector-General of Civil Hospitals, Bengal, has been granted furlough for eight months. Surgeon-Colonel O'C. Raye succeeds him in Civil Administrative charge of Bengal.

By a series of exhaustive experiments, Surgeon-Lieutenant R. H. Elliot, who is now acting as Professor of Biology at the Presidency College, Madras, is said to have proved that strychnine is no antidote to snake-poison.

At the last University Examination of Bombay Aloysius H. Fonseca, the son of Assistant Surgeon D. B. Fonseca of Kamptee, successfully passed the Intermediate Examination, in the 2nd class.

Consequent on Dr. Hooper's selection to succeed Sir Joseph Fayer, Dr. McDonagh goes from Allahabad to Lucknow, and Dr. O'Brien, of Benares, will be Civil Surgeon of Allahabad.

Surgeon-Colonel Cleghorn returns from leave and relieves Surgeon-Colonel Raye as Inspector-General, Civil Hospitals, Punjab.

At the distribution of honors to the successful students of the Lahore Medical College, His Honor the Lieutenant-Governor presided and gave away the prizes and certificates.

Messrs. Burroughs, Wellcome and Co. of Snow Hill Buildings, London, E. O., are prepared to supply antitoxin to the profession for the cure of diphtheria.

Dr. H. Wells, M.B., C.M., has been admitted to the Unconvenated Medical Service and posted, as Civil Surgeon, to the Ruby Mines, Mogok.

Surgeon Lieutenant-Colonel Geoffrey Hall has just successfully passed for a Fellowship of the Royal College of Surgeons of England.

Assistant Surgeon John E. White, D.G.M.C., I. M. S., resigns the service and enters on private practice in Bombay. We wish Dr. White every success.

Dr. J. A. Kelly, L.R.C.P. & S. Edin, Assistant Surgeon (Madras) and a Teacher in the Hyderabad Medical School (Deccan) has been selected F.O.S. London.

Dr. Chintaman Ramchandra Bakhle, of Bombay, has been admitted M.R.C.P. London, by examination.

We cordially wish all our readers a Happy New Year.

Current Medical Literature.

MEDICINE.

Lunatics who are Sane.

FRENZY, or great mental strain may so far unbalance mental equilibrium as to temporarily cause madness, which is not however so strongly or permanently developed as to justify the common practice of immuring the victim within the walls of a lunatic asylum where, if he is not already so, he may eventually be driven into a maniacal condition. And it frequently happens that to suit the cupidity or other ends of relations, &c., perfectly sane men and women are pounced upon and carried off to some asylum or another where they are compelled to endure all the miseries of companionship with those who are really mad. Not a very pleasant nor desirable picture of which instances can be easily multiplied, and are likely to continue to be so until the "Lunacy Laws" are revised and stringent measures adopted for the proper identification of those who are really insane, and for the easy access of duly qualified and State-appointed visitors and inspectors to the interior of these asylums for the purpose of unbiassedly watching the actual mental conditions of the victims within their walls and precincts with a view to the proper custody of those who are irretrievably insane and the release, under observation, of those whose mental aberration was only temporary and fugitive.

An unusual mode of transmitting Syphilis.

A MAN *et. 35*, was at the age of 28 infected with syphilis presenting a chancre, enlarged inguinal glands and mucous patches in the pharynx. He submitted to an energetic course of mercurial inunctions with apparent benefit; but syphilitic palmer psoriasis and other symptoms appearing in eight weeks' time he underwent a second inunction course followed up by Pot. Iod. Just prior to the marriage he took a third course of inunctions and then married a healthy girl by whom he had three healthy children and no miscarriages. The woman subsequently coming under the observation of SINGER with typical broad condylomata on either side of the labia majora, enlarged glands and syphilitic psoriasis on her neck, enquiry elicited that some months back there appeared on her husband's penis an herpetic ulcer and that was painless and soon disappeared, but it was from this time only that the symptoms of the wife dated; the only possible explanation is that the syphilitic poison had somewhere in the body of the husband (perhaps encapsulated within the prepuce) remained latent till set free from some unknown cause to occasion the vesicle that proved capable of transmitting the infection.

Treatment of Leucoplakia of the Tongue.

AFTER all other remedies had failed him in the treatment of a case where for *several* years a patient had suffered from exaggerated and very painful lingual leucoplakia probably consequent on a primary sore, (on the penis), contracted 13 years previously, but without sequelae, S ROSENBERG obtained a marvellously rapid cure by pencilling the tongue with a 20 per cent. solution of iodide of potassium. LEISTIKOW got very quick and successful results by several times a day (particularly after meals and just before going to bed) painting the patient's tongue by means of cotton-wool pledgets dipped in the following:—R *Terra silicea* 22.5 grs., *Resorcin* 45 grs., *Adipis* 3i, worked into a thick paste which dries on the part and penetrates deeply into the substance of the mucous membrane. The mouth must also be freely washed out with a solution of *boric acid* in water and this

hyperemia of the surface to which the ointment has been applied may be obtained by application of Peruvian balsam. Smoking and the use of pungent condiments must be strictly interdicted.

Pleuritis with Purulent Effusion cured by Aspiration.

A CASE of pleuritic effusion cured by aspiration is related by JAMES CARMICHAEL. The patient, a little girl of one year and nine months, had been ill for five weeks before admission with slight cough, and was becoming feeble and anemic. Physical signs of effusion on right side. The pleura was aspirated and twelve ounces of pus removed. Two days afterwards aspiration was again done, and three ounces of pus withdrawn. Five days later the process was repeated and four ounces removed. Again, three days later, three ounces were removed. It was now decided to drain, but, on incision, no pus escaped, and the wound was at once closed, and healing by first intention insured. Five days after incision aspiration was again tried, this time bringing two and one-half ounces of pus. No further aspirations required, the child making a complete recovery. Discharged well two months after admission. In all, five aspirations were done. Six months after leaving the hospital no difference could be detected in the physical signs on the two sides of the chest.—*Edin. Med. Jour.*

Inoculability of Cancer.

To solve the problem of the contagiousness of cancer GRATEA and LIENAU tried several experiments when they found that, with one exception, perfect union was obtained when they grafted fresh cancer into the skin, peritoneum and wall of the stomach; but when those organs that are most susceptible to cancer were inoculated with fresh cancer juice obtained by pounding or scraping primary or secondary tumours, the results were negative, and so were all attempts to transmit cancer from dog to dog, whether by grafting or by inoculation. Whence they infer (1) the parasitic nature of cancer has not been conclusively demonstrated; (2) grafting of cancer may be established in those persons chiefly who are predisposed to cancer; (3) the contagiousness direct or indirect of cancer is not proved.

Management of Measles.

THE danger in measles and whooping-cough lies in the complications, e.g., bronchitis and pneumonia, which may be coincident with the eruption on the skin and on the mucous surface of the bronchi and pulmonary vesicles—bronchopneumonia secondary upon measles or whooping-cough will occur either from lack of judicious treatment, or from the carelessness of the patient. Treatment should consist in keeping the patient in a warm room, and administering repeated full-doses of acetate of ammonia, which is eliminated by the lungs and destroys the microbes.—COHEN, in *Jour. de Méd. de Paris*.

Diagnosis of Infantile Scurvy.

BARLOW and NORTHEUP shewed that infantile scurvy was one of the results of faulty nutrition, and FRUITRIGHT finds that more cases are met with now than were encountered when breast feeding was more general, yet admits that scurvy does sometimes occur in breast-fed children, and especially in those who have been weaned too early and irregularly fed. As the disease has sometimes been confounded with acute rickets, rheumatism and infantile paralysis, he looks upon scurvy as the result of a faulty nutrition, leading to deficient alkalinity and a deviation of the normal constitution of the blood, and points out that though the bone and joint symptoms first appear in the lower extremities, they must always precede the mouth symptoms and hemorrhagic extravasations and that the three important symptoms were the bone lesions, the spongy condition of the gums, and the petechie also that under antiscorbutic scurvy generally ran a favorable course.

SURGERY.

Treatment of Prolapses of the Rectum.

DR. J. D. BRYANT says:—

1. That the proper performance of the physiological functions of the rectum contributes greatly to the advancement of rectal disease and to the sufferings of the afflicted.
2. That the complete vicarious discharge of the feces through an artificial anus located in the sigmoid flexure reduces the physiological demands on each structure of the rectum to a minimum.
3. That the lessening of the physiological requirements is commonly in direct proportion to the diminution of the fecal flow through the rectum.
4. That the cessation or lessening of the fecal discharge per rectum exercises a palliative and curative influence on diseases of the rectum.
5. That in certain cases of obstinate rectal prolapse the formation of a vicarious channel for fecal discharge is justifiable, both as a palliative and curative measure.
6. That the preliminary establishment of such a channel for the purpose of cleanliness and the prevention of infection is justifiable in many grave operations for prolapse of the rectum.
7. That the dangers attendant on the formation of an inguinal anus are much less than those invited by the contact of fecal discharges with large operative surfaces of the rectum.
8. That when cure takes place great care must be exercised thereafter, otherwise the prolapse will return.—*Mathews' Medical Quarterly*.

Subdural Hemorrhage.

DR. SHELTON HORSLEY records a case of this character which occurred in a man aged forty-three years. He had a syphilitic history and had been a hard drinker. One day in August, while sitting in a wagon he fell off, striking his left parietal eminence against a kerbstone. The wound was about an inch and a half long, but slight and not extending to the bone. He got up and seems to have had a slight convulsion affecting the left arm. He was then sent home, and at this time he was quite conscious. Half an hour later he suffered from general convulsions, and an hour after this was unconscious, with stertorous breathing. The head and eyes became turned to the left side and there was frequent spasm of the left arm. The patient gradually sank and died. Eight hours after the accident, at the necropsy, the blood vessels of the cortex were all engorged. There was found to be an irregularly shaped clot on the outer surface of the right temporo-sphenoidal lobe, covering a portion of the outer surface of the three temporo-sphenoidal convolutions. There was also a small clot on the anterior portion of the inner surface of the ascending frontal convolutions at its upper end. The walls of the blood vessels were much degenerated and therefore liable to rupture, and it is interesting to know that there was no fracture of bone and that the largest extravasation was found almost diametrically opposite to the point at which the skull had impinged on the kerbstone.—*Philadelphia Med. News*.

Trephining for Infantile Hemiplegia.

AN interesting case is described by Dr. ANGELL, of a patient, a child aged six years, suffering for infantile hemiplegia affecting the right side. The birth was difficult and prolonged, and the condition apparently arose at that time. The child had the usual condition of mal-development on the affected side,

it was mischievous, irritable, and dirty in habits, quite unable to use the right hand, and suffered from daily epileptiform attacks. Trephining was performed and a cyst punctured, but no attempt was made to remove it. With the exception of a severe convulsion and a high temperature a few days after the operation, the result of the pressure apparently of a too tight bandage, the patient's progress was excellent. The child was soon taught to be cleanly, began spontaneously to use the right hand, feebly and awkwardly, of course, and ceased to have convulsions. Six months after operation the condition was still improving. There had been no fits, and the mental improvement was maintained.—*Jour. Nervous and Mental Diseases.*

Treatment of Pelvic Abscess.

VOGEL maintains that a solitary pelvic abscess should be incised through the vagina, the operator discarding specula and other vaginal instruments, and trusting rather to his sense of touch to locate the prominent part of the abscess. For parametritis, pyocoele retro-uterina, or adhesive pyosalpinx, where the abscess cavity is cut off by pathological processes from the peritoneal cavity, a simple puncture suffices, but when the abscess cavity may not, with safety, be cut off from the peritoneal cavity, the edges of the sac and of the vaginal wound should be brought together by pressure forceps, which may be removed in 18 to 24 hours when the sac adheres to the vagina. Bleeding may be checked by the pressure forceps or by gauze tampons. A-I drain and a strip of gauze are passed into the sac, the gauze being removed in 36 hours and the I drain retained for 14 days or until the pus smells foetid or does not properly escape. The cavity being now and then washed out with Condy's fluid, the vaginal wound is kept open for several weeks by a spring wire drainage tube, especially when the patient insists on walking about.

Correction of High Myopia by Extraction of the Crystalline Lens.

T. WIDMARK has performed the operation suggested by FUKALA upon a servant-girl 23 years old, the degree of near-sightedness being 18 D.; visual acuity of the left eye, 0.1 to 0.2; of the right eye, 0.1. There were small atrophic spots on the choroid. The author had prescribed glasses (—13 D.) but she could only use them for a short time. Dissection was performed on the right eye, and the following day the crystalline lens was extracted, through a simple linear incision upward, about two millimetres inside the limbus corneae. V. A. 0.1, R. normal; twenty-four days later, V. A. 0.4 to 0.5, Hyperopia + 0.50. Myopia = 0. According to WIDMARK, the immediate danger after the operation is slight, but he cautions against its performance on both eyes, and believes it should only be attempted in cases of emergency.—*Hygia.*

Transplantation of the Human Cornea.

AT a recent meeting of the Vienna Society of Physicians, Professor FUCHS exhibited a case of transplantation of the human cornea. It is well known that Professor HIPPEL has succeeded in transplanting pieces of the cornea in four cases; but the pieces of cornea that he transplanted were small, whilst Professor FUCHS used flaps of from 4 to 5 mm. in diameter. Large pieces of the cornea, when transplanted, do not become opaque so soon as small ones. The pieces for transplantation used by Professor FUCHS in his case were taken from a human eye. Four weeks had elapsed at the time of exhibition since the operation had been performed, and the piece implanted was perfectly transparent, whilst in previous cases the opacity had commenced after the tenth day.

OBSTETRICS AND GYNECOLOGY.

Removal of Appendages: Fatal Haemoptysis.

QUENU cured a virgin, *et. 37*, for leucorrhoea and enjoined rest for two months. As she got worse instead of better, she was operated on and the appendages removed because the tubes were found fixed by adhesions, caseating, tuberculous and yellowish. She was doing well, but violent haemoptysis setting in on the third day, she died.

Dystocia from Tumour in Fetus.

MARSEN was present at an occipito-posterior presentation accouchement in which anaesthetics were employed as the child was easily expelled as far as the umbilicus; but its pelvis had stuck so fast that severe traction had to be used. The child died after birth, its pelvis was nearly 16 inches in circumference and on each gluteal region was a large congenital myxo sarcoma. KRASSOVSKY reported a somewhat similar case in which, however, the feet presented at beginning of labor and delivery, was considerably protracted by a large gluteal tumour on the foetus.

Fibroids and Conception, Pregnancy and Labor.

HOFMEIER denies that fibroid disease of the uterus where myoma or polypus, exerts any influence towards fertility or sterility, as these tumours seldom appear till late in sexual life, when the causes of fecundity or sterility must have influenced the woman long before the development of her fibroid. He thinks the best time for hysterectomy is a few weeks or months after delivery, and declares that unless the uterine cavity is rendered unfit to bear through the size and relations of the tumour, fibroids do not predispose to abortion, nor do they in any way interfere with gestation or with uterine contractions during labor.

Coils and Knots on the Funis.

As knots on the cord sometimes form after coils have been disengaged from the foetus during labor, LOVIOT urges that as the majority of births the head presents from the very first, the foetus can be freed from the coil, and knotting may be prevented and the loop undone by pulling it backwards in the direction whence it came. He thinks that knots being usually associated with long cords, the chance of danger from disengaging such a coil are trifling, and will not kill the foetus; but when the cord is a short one, and is constantly dragged upon a knot, would aggravate the evil by interfering with external rotation, or prematurely detaching the placenta, or inverting the uterus, or by killing the foetus.

An Ideal Napkin.

THIS is made from cheesecloth and cotton, both baked so as to be rendered sterile. A square is cut from the cheesecloth, nine by nine inches, folded over, and a piece of absorbent cotton of the same size (four and a half by nine inches) is placed between the folds. In this manner is prepared in the simplest possible way a compress available for receiving either the menstrual flow or the post-partum discharges, which is readily applied and which adheres closely when the subject is in the semi-recumbent position. Before applying afresh, the external genitals and the vulva should be bathed with warm water. It will not be amiss to give two warm vaginal douches, by means of a suitable syringe, every day. Should any odor be noticeable, the compress may be dusted with powdered boric acid. The addition of a little eucalyptol to the water for bathing adds materially to comfort.—*AMER. IN Medical Age.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The Physiology of the Spleen.

VULPIUS declares that histological study of the normal splenic tissue shows the possibility but not the certainty of the entrance of colorless cells into the circulation from the spleen: It is evident that the red cells undergo disintegration in the spleen, but there is no ground for assuming that they are formed in the spleen: Comparison of the blood of the splenic artery and vein shows no positive difference: In acute general anemia the spleen shows signs of increased activity: Removal of the organ causes a transient decrease in the number of red, or increase in the number of white, blood-cells: The thyroid gland has no vicarious relation to the spleen: Lymph-nodes and the bone-marrow acquire an increased blood-forming activity after extirpation of the spleen: Regeneration of blood is retarded after hæmorrhage in persons without spleens.

These conclusions, though contradicting certain accepted teachings, offer little that is new, but are of value in that they are based upon accurate scientific data, and corroborate much that has already been done. Unfortunately our knowledge of the physiology of the spleen is still left in a state of confusion.

The Relationship between Bovine and Human Tuberculosis.

SHERMAN and JAMKIN report the case of a boy, four years old, whose maternal grandfather had died of pulmonary tuberculosis, and whose nurse had about a year previously attended a daughter who also had died of pulmonary tuberculosis. The child had slight adenoid vegetations in the vault of the pharynx, and had suffered from two attacks of pneumonia, from both of which he had recovered entirely. When the boy came under observation, he presented a spastic gait, frequently stumbling. Classic symptoms of meningitis, believed to be of tuberculous origin, progressively developed and led to a fatal termination. Inoculation with tuberculin of three cows, from which was derived the mixed milk used by the patient, induced febrile reaction in two, and *post-mortem* examination in these demonstrated the existence of tuberculosis.—*N. Y. Med. Rec.*

The Bacterio Pathology of the Tooth-Pulp.

As the outcome of a study of the pulps of 250 diseased teeth, MILLER formulates the following conclusions: The infectious processes of the tooth-pulp are associated with but few exceptions, with mixed infection, cocci and bacilli being almost equally represented. Somewhat less frequently long, thin threads and spirals are found. Bacilli and threads with spores are also sometimes present, but not frequently. The microscopic examination of cover-glass preparations alone justifies the assumption that micrococci especially participate in the suppurative process. The bacteria find their way to the pulp principally through carious dentine, even a thin layer of which suffices to protect the pulp from infection. Infection of the pulp through the circulation, while conceivable, is scarcely capable of direct demonstration. The pulp is predisposed to infection by the action of the products formed in the carious dentine, such as acids and ptomaine. Forms of bacteria, particularly spirals, not capable of cultivation, play a prominent part in the production of disease of the pulp. A considerable number of cultivable bacilli have been found in connection with disease of the pulp; but, as a rule, they possess no special pathogenic activity. The typical pyogenic cocci, the staphylococcus pyogenes aureus and albus, and the streptococcus pyogenes, are but rarely found in pus in the pulp. On the other hand,

a number of cocci, particularly a closely related group that induce suppuration in mice, are found. In spite of careful search the presence of the pneumo-cocci could not be detected. The activity of cocci found in the pulp is increased by co-existence of putrefactive processes. A putrid condition of the pulp, whether the presence of bacteria in the body be demonstrable in pure culture or not, is always a dangerous source of infection. The putrefactive processes in the tooth-pulp are to be ascribed to various forms of bacteria. The putrefactive products are not always the same. In addition to gaseous substances there occur others whose nature is deserving of further study.—*Med. News.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Physical Culture in Unhealthy Schools.

THERE are one hundred and eighty sanitariously defective schools in Chicago, and the city spends about \$4,000 annually on an athletic overstrain far called "physical culture," whose chief purpose seems to be to provide "professional foreigners" of the ward-healer type with an occupation. The money wasted on this "physical culture" humbug could be advantageously employed in remedying the sanitary defects of a few schools.—*Med. Standard.*

How to Prevent the Spread of Venereal.

EVERY woman known to be a person of ill-fame should be duly licensed. She should be compelled to attend twice a week at some municipal building set aside for this purpose, there to undergo a proper medical examination by a physician appointed by the State, who should also enter her name, address and description in a book as a means of identification and endorse her license, such endorsement to hold good until next examination. If found diseased she should be sent to the nearest State hospital.

No male should be allowed to marry or to obtain a marriage license until he shall produce before the recorder a certificate from a physician stating that he is not contagious in a venereal sense, and that he has not contracted syphilis for three years past.

All wet nurses should, before entering on their duties, obtain a certificate of health from the certifying physicians.

All vaccination should be done solely by calf lymph.—*Pacific Med. Jour.*

A Condemned Bible.

AT the recent sessions of the Central Criminal Court, a prisoner was convicted of a crime which need not be specified; suffice it to say that a girl of the tender age of eleven years was, in consequence of that crime, infected with the virus of syphilis. The oath was administered to her in the customary way, whereupon MR. JUSTICE COLLINS very promptly and properly ordered the book to be destroyed. We have often insisted on the danger of the indiscriminate swearing of witnesses on the same volume of Holy Writ. It is matter for congratulation that the knowledge of this danger is reaching beyond the medical profession, and more so that so high a personage as one of Her Majesty's judges has publicly recognised the fact.—*Lancet.*

Imputation against a Medical Man: Apology and Withdrawal.

IT may be remembered that at the assizes held here last Easter, an action was brought by MISS GREY, a dress-maker at Waterloo, against DR. ALEXANDER MACKENZIE for damages, it being alleged that by his negligence in not discovering that her servant was suffering from small-pox the disease had spread through the house and ruined her business. The case ended in a verdict for the defendant, DR. MACKENZIE

being exonerated from any negligence. On 29th September last Miss GREY wrote a letter to a lady, in which she implied that Dr. MACKENZIE had committed perjury. The case was brought before the county magistrates on the 15th inst., and, counsel on each side having spoken, it was stated that Miss GREY had agreed in the frankest manner to withdraw and apologise for what she had written and to pay Dr. MACKENZIE a small indemnity in the shape of costs, which had been agreed upon. The presiding magistrate, while regretting what had happened, expressed the wish of the bench that the matter should be settled as proposed.—*B. M. J.*

:o:

THERAPEUTICS AND PHARMACOLOGY.

Turpentine in Incontinence of Urine.

THE unpleasant smell emitted by persons suffering from incontinence of urine can be conveniently covered, according to Dr. EMMINGHAUS, by means of ten-drop doses of turpentine administered in milk or water three times a day. This converts the smell of stale urine into an odour resembling that of violets, as is well-known to persons who have taken turpentine. The remedy is perfectly harmless in most cases, and has been given by PROFESSOR EMMINGHAUS for many weeks at a time without any inconvenience. It is, however, contra-indicated in ulcer of the stomach, gastric catarrh, and nephritis, and also some persons in whom turpentine tends to upset the digestive functions.—*Lancet.*

To Relieve the Thirst of Diabetics.

Pilocarpin may be administered in solution or in pill-form. The pills are best prepared by the addition of glycerine and gum arabic. Each contains $\frac{1}{10}$ grain of pilocarpin nitrate.

For the solution the following formulae is given:—

| | | |
|------------------------|-----|---------------------|
| R. Pilocarpin. nitrat. | ... | gr. $\frac{1}{4}$. |
| Spirit. vini dilut. | ... | ℥ss. |
| Aque | ... | 5j.—M. |

S.—The tongue is to be moistened with 5 or 6 drops on this solution four or five times daily.—*Nouv. Remèdes*, No. 11; *Corr.-bl. für Schenk. Aerzte*, 1894, No. 18.

On the administration of Chloral to Young Children.

DR. J. C. WILSON places much reliance on the soothing influence of chloral hydrate over the irritations of scarlet fever. As a rule, the drug is easy of administration and well borne by the stomach. I have found its acid after taste best masked by the administration in Anbergier's syrup of lactucarium diluted thus:—

| | | |
|-------------------------------|-----|----------|
| R. Chloralis | ... | gr. xxx. |
| Syrup. lactucarii (Anbergier) | ss | ... |
| Aque | ... | ℥ss.—M. |

Sig.: A teaspoonful in iced water every two, three or four hours.

The administration of nourishment immediately after the medicine is desirable. The sleep-inducing properties of the drug manifest themselves rapidly, but are not prolonged; therefore, its repetition at intervals of two or three hours is called for.

Cactus Grandiflora in Heart Disease.

IN two cases of Grave's disease, three of cardiac organic affections, and two of chronic parenchymatous nephritis MIKHAILOFF used the fluid extract and the tincture of cactus and found (1) a slight rise of arterial tension, disappearing on stopping the drug, (2) micturition increased in cases of Grave's disease but unaltered in cases of renal disease, (3) quick subsidence of dyspnoea and cardiac palpitation, (4) for permanent results prolonged exhibition and increasing doses of this remedy seem to be necessary.

CONTENTS.

A MEDICAL REGISTRATION ACT FOR INDIA. TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—With the advent of a new year and formation of the Indian Medical Association, our first duty to the profession is to make an effort to define the legal status of all qualified practitioners by the introduction of a Registration Act. The *Record* has often offered criticisms on the subject of such importance, and in the absence of any law protecting practitioners and their rights, the matter is not as simple as might be thought, while necessity for legislation in this direction may be expressed in the quotation of "*Tempora mutantur, nos et mutamur in illis.*"

By the Medical Act of 1858, 21 and 22, Vict. C. 90, amended in 1886, by 49 and 50 Vict. C. 48, no practitioner can maintain a professional claim in a law court unless he (or she) be duly registered, and this, despite the fact of possessing all the degrees or qualifications in the universe. Previous to the above Acts, physicians could not recover their fees, unless there was a special contract, whereby the patient, or some other person, promised and agreed to pay them:—(CHORLEY *vs.* BOLCOOT, 4 T. R. 317; VEITCH *vs.* RUSSELL, 8 Q. B. 928; Attorney General *vs.* College of Physicians, 80 L. J. C. 757.) It is presumed that anterior to 1858, the onus of proving a contract remained with the physician, and this difficulty was enhanced if the arrangement happened to be of a verbal nature, and the patient or other contracting party of an evil disposition. Now, however a physician can recover reasonable charges, &c., if duly registered (GIBBOR *vs.* BUDD, 32, L. J. Ex. 182). In the extreme presence of a patient repudiating liability as to contract, simple proof of attendance on the practitioner's side would be sufficient to constitute contract by implication to be good in law. An unqualified practitioner is not entitled to enforce a contract connected with the carrying on of a business, to carry on which lawfully, he needs to be registered (DAVIES *vs.* MAKUNA, L. R. 29, Chapter D. 586). But a qualified practitioner need not be registered at the time of rendering service, still he is compelled to register before he can sue if occasion occurs to necessitate him suing (LEEMAN *vs.* HOUSELY, L. J. Q. B. 22). As regards the Medical Register itself it is laid down.—"The Registrar of the General Medical Council is required to publish, every year, a correct list in alphabetical order, of the names of all persons qualified to practise, with their places of residence; such list to be called the Medical Register, and the absence of any name from such list will be evidence, in any court of law, that such person is not duly registered."

Protection is similarly afforded to Surgeons, Apothecaries, Accoucheurs and Dental Surgeons. Although by the Dentist's Act of 1878-41 and 42, Vict. C. 33, qualified medical practitioners are exempt from any liability or penalty.

That there is no obstruction before Government in formulating an Act for India is shewn under 31 Vict. C. 29, which indicates—"Every colonial legislature has full powers to make laws for enforcing registration within its jurisdiction, &c." Certain modifications are essential in

detailing a Medical Act for India, but the principles ought to be extended also to the constitution of chemists and druggists and others undertaking the sale of poisons and preparations of prescriptions. Fortunately it is repugnant to the feelings of a medical man to seek redress in a law court in connection with his profession, or to resort to such measures in any shape or form, however justifiable his reasons may be, but it has come within my knowledge, that defaulting or unscrupulous individuals have to be educated up towards realising that the medical profession invest both time and money in acquiring an honorable calling, and are equally entitled to be remunerated in the practice of their vocation. To demonstrate the impotency of a medical man's position in India, as to his legal status when suing, and the expression "reasonable charges," the patient pleaded through his lawyer non-liability on the ground of friendship, no contract, and exorbitant fees, to prove the latter a few other patients were cited as witnesses to shew they were usually charged less. The judge naturally disregarded the plea of friendship, and the doctor produced sufficient material to leave no doubt as to an implied contract (according to Addison), a reference was made to the High Court, the amount in dispute being only Rs. 75 the doctor got a decree, his fees being reduced by half. His partial success was due solely to being able to shew a contract of some sort or other and placed him in the position of a man practising before 1858, because he was not registered (though qualified to do so) and the High Court raised this technical objection.

The medical man in question qualified at home, and assuming there was no Act in India, he unconsciously neglected to register under the British Acts. I believe there are many Indian, Eurasian and European gentlemen who have similarly omitted to take this precaution, to their own apparent disadvantage, but what about those who qualify in India? If they are not permitted to legalize their Indian qualifications in London without qualifying at home also, what would their legal status in a law court be under similar conditions of the foregoing, and presuming they were allowed to register at home? Why should such a course be necessary when the expense and distance might be obviated by a Medical Act which already exists in Australia, Canada and other British colonies? The Bombay Medical Union, a few years back, petitioned for this reform, I think, making ample provision about indigenous practitioners who practise solely on the native system of medicine, but usurpers were to be dealt with rigorously and rightly so, as the English Act stipulates a summary conviction of £20 for falsely using the title of physician, surgeon, apothecary, or general practitioner. In India, these designations are used barefacedly because there is no recognised law, hindrance, or organization to institute proceedings for misrepresentation against those guilty of such a misdemeanour. Public policy demands legislative interference on their own behalf, as all their wants and requirements can be met by men fully qualified, without having to rely on persons as skilled in deception as they are unskilled in a profession in which they have no right, title or interest to practise so long as they make no effort to carry their

unsavory dealings into publicity. This class of men is far worse than the *vakil's* tout, who flounders at the expense of one pocket, while the former respects neither the pocket or life of their unfortunate dupes. In conclusion, I would beg of all members of the profession to exercise their influence and dignity in supporting the Indian Medical Association whose object it is to elevate the faculty in India by every constitutional means in its power to the advantage of younger members and particularly Indian graduates, who are starting life as medical men. Your profession is a noble one, and your dignity depends on your own dignified manner in which you practise it. It is only too common, yet a painful truth, that many members try to elevate themselves at the expense of their professional friends. Work in fair competition, but do nothing derogatory in thought or deed. If you succeed on such terms, it will always be a pleasure to know you were free from reproach both in your own and your friend's minds, always adopt the motto of "*Dum vicinus, vivamus*" to those entitled to compete with you.

Yours &c., ALF. McCABE DALLAS, L.M. Dub., L.R.C.P.I., &c.
KUMBHIR, 1st January 1895.

CINCHONA FEBRIFUGE IN TERTIAN AND QUARTAN AGUE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Quinine, though invaluable in the quotidian form of ague, is of little or no value when the ague assumes its tertian or quotidian forms. Then cinchona febrifuge becomes the remedy *par excellence*, as it generally breaks the fever paroxysm on the first day of its administration.

My procedure, while in medical charge of the taluka dispensaries at Modassa, Paranty and Samund, and during my present private practice, was to carefully enquire the approximate time that the fever paroxysm generally occurred (the afternoon usually) and six hours before the attack to give two four-grain pills of cinchona alkaloid. These pills were repeated every two hours till the fever came on, and it was seldom indeed that the ague, instead of being immediately checked, re-appeared on next turn-day.

I preferably give the pills on an empty stomach; but as the cinchona alkaloid, if taken alone, has a tendency to provoke headaches, giddiness, nausea and vomiting, I advise the patient (adult) to wash down the pills with 3 grains of carbonate of ammonia and 20 grains of bicarbonate of soda, dissolved in a wineglassful of water, so as to counteract the nausea, &c., and facilitate the action of the pills.

Yours, &c., JOSEPH BENJAMIN,
Medical Practitioner, Ahmedabad.

DIURETIN.

PANOWSKI prefers diuretin to digitalis whenever slowness of the pulse is a forerunner of uræmia, but does not recommend it in other cedematous conditions, although he lauds its value in valvular lesions and cardiac and renal affections where digitalis, camphor and caffeine have not given relief. He found it exert a tonic action on the cardiac muscles and a considerable increase of pressure in the vessels, which latter may probably be attributed to stimulation of the nerve centres, and thinks that the strongly-marked diuresis is really due to the increased pressure in the vasomotor system.

Government Medical Gazettes.

GOVERNMENT OF INDIA.

Surgn. Lieut. E. H. Sharmar, I. M. S. (Madras) to be offg. med. offr., 6th Infy, *vice* Surgn.-Lieut. G. Bidie, on furlough, 27th Nov.

Surgn.-Maj. P. D. Pank, I. M. S. (Beng.), Ready. Surgn. in Maywar, held temporary charge of the current duties of the office of Resdt. in Maywar, in addition to his other duties, from the 16th Sept. to the 1st Nov.

Surgn.-Capt. C. A. Johnston, I. M. S., (Madras), to be offg. med. offr., during the absence of Surgn.-Maj. C. Mallins, M.D., apptd. to office, as Depy. San'y. Commr., Madras, 6th Dec.

Surgn.-Maj. G. J. Kellis, I. M. S. (Beng.), med. offr., 4th Lancers, to be med. offr., *vice* Brig.-Surgn. Lieut.-Col. J. F. Sargent, of the 2nd Lancers, 1st Dec.

Surgn.-Capt. E. H. Wright, I. M. S. (Madras), to be offg. med. offr., 8th Infy., *vice* Surgn.-Maj. H. G. L. Wortabet, M.D., on furlough, 9th Nov.

Surgn.-Col. R. Harvey, M.D., D. S. O., Insp.-Genl. of Civil Hosps., Beng. leave (*p.a.*) for eight months.

Surgn. Lieut.-Col. William Henry Gregg to be Brig.-Surgn. Lieut.-Col., 20th June 1894.

Surgn. Lieut.-Col. Joseph Wilson, M.D. (Beng.) is permitted to retire from the service.

Asst. Surgn. George Murray Benjamin, I. M. S., Beng., is permitted to resign the service.

Hosp. Asst. Sobha Ram, of the Sudder Dispy., at Ulwar, held charge of the duties of the Agency Surgn. there in addition to his own, from the 9th July to the 31st Oct.

Hosp. Asst. Muhammad Nazir, of the Erinpura Irregular Force, availed himself of 15 days' leave on full pay from the 20th Nov.

From date of assuming charge Surgn.-Col. D. O'G. Raye, M.D. Offr. Insp.-Genl. of Civil Hosps., Punjab, is apptd. to office, as Insp.-Genl. of Civil Hosps., Beng., during the absence on leave of Surgn.-Col. R. Harvey, M.D., D. S. O.

Hosp. Asst. Chanda Singh, of the Abu Charitable Dispy., held charge of the Rajputana Agency Hosp. and of the Detachment, Erinpura Irregular Force, in addition to his own duties, from 1st Nov. to 14th Dec.

Hosp. Asst. Ashgar Ali Khan, of the Rajputana Agency Hosp. received medical charge of the Detachment, Erinpura Irregular Force at Abu, from Hosp. Asst. Chanda Singh, on the 16th Dec.

BENGAL GOVERNMENT.

Surgn.-Maj. R. H. Charles, Prof. of Surgical and Descriptive Anatomy, Med. Coll., Calcutta, and *ex-officio* Second Surgn. to the Coll. Hosp., acted as Prof. of Surgery, Med. Coll. Calcutta, and *ex-officio* First Surgn. to the Coll. Hosp., from 16th Oct. to 1st Nov., *vice* Surgn. Lieut.-Col. J. O'Brien, on leave.

Surgn.-Capt. F. O'Kinealy, Resdt. Med. Offr., Med. Coll. acted as Prof. of Surgical and Descriptive Anatomy, Med. Coll., and *ex-officio* Second Surgn. to the Coll. Hosp., *vice* Surgn.-Maj. E. H. Charles.

Dr. P. R. Hay Jagannadham, Offg. Civil Med. Offr. of Khulna, is allowed priv. leave for three days in extension.

Surgn. Lieut.-Col. C. J. W. Meadown, Civil Surgn. of Murshidabad, to act as Civil Surgn. of Burdwan, *vice* Surgn. Lieut.-Col. G. Price.

Surgn.-Capt. G. Jameson, Offg. Civil Surgn. of Rajshahi, to act as Civil Surgn. of Malda.

Surgn.-Capt. W. J. Buchanan to do genl. duty at the Preddy, on being relieved of duties as Offg. Civil Surgn. of Champaran.

Surgn.-Capt. T. Grainger, Civil Surgn. of Khulna, to act as Civil Surgn. of Naskibail, *vice* Dr. C. Banks.

Asst. Surgn. Kali Nath Banerjee leave for one month in extension.

Asst. Surgn. Khitrode Chandra Chowdhuri did superny. duty at the Campbell Hosp. from 5th to 24th Nov.

Asst. Surgn. Khitrode Chandra Chowdhuri to do the duties of Mr. Brittain at the Campbell Hosp. during his absence on leave.

Asst. Surgn. Kunja Behary Nuzid, of the Cox's Bazar sub-lev. and dispy., is apptd. to the dispy. at Jamul, Monghyr Dist., *vice* Asst. Surgn. Gopal Chunder Mukerjee, transferred.

Asst. Surgn. Annada Prasad Bhattacharya, at the Med. Coll. Hosp., is apptd. to the Cox's Bazar Dispy., Chittagong Dist., *vice* Asst. Surgn. Kunja Behary Nuzid, transferred.

Surgn. Lieut.-Col. B. Bosh made over Bandipore Jail to Brig.-Surgn. Lieut.-Col. F. C. Nicholson, 2nd Dec.

Surgn.-Capt. W. J. Buchanan made over Motihari Jail to Surgn.-Lieut.-Col. E. Byvill, 8th Dec.

Surgn.-Capt. R. Bird made over Dacca Central Jail to Surgn.-Lieut.-Col. E. G. Russell, 18th Dec.

Surgn.-Col. R. Harvey, M.D., D. S. O., Insp.-Genl. of Civil Hosps., Beng., leave (*p.a.*) for eight months.

Surgn. Lieut.-Col. William Henry Gregg to be Brig.-Surgn. Lieut.-Col., 20th June 1894.

Surgn. Lieut.-Col. Joseph Wilson, M.D., (Beng.) is permitted to retire from the service.

PUNJAB GOVERNMENT.

Surgn.-Capt. A. Coleman, Supdt. of the Montgomery Central Jail, priv. leave for 2 months and 27 days, 2nd Nov.

Surgn.-Maj. D. St. J. D. Grant resumed duties as Professor in the Lahore Med. College and Chemical Examr. to the Govt. of Punjab, 23rd Nov., relieving Surgn.-Capt. C. H. Bedford, whose services have been replaced at the disposal of the Govt. of India.

Brig.-Surgn. Lieut.-Col. Maasy, Civil Surgn., Murree, priv. leave for one month, 1st Dec.

Asst.-Surgn. W. Clark, Lawrence Memorial Asylum, Murree, to office, as Civil Surgn. of Murree, in addition to his own duties, 1st Dec., *vice* Brig.-Surgn. Lieut.-Col. G. Maasy, on leave.

Hosp. Asst. Sunder Singh, from the Sayadwala to the Kamalia Dispy., Montgomery Dist., 22nd Nov.

Hosp. Asst. Sahadat Ali, Kamalia Dispy., Montgomery Dist. three months' priv. leave, 27th Oct.

Hosp. Asst. Ghasia Mal resumed charge of the Mong Dispy., Gujrat Dist., 17th Nov., relieving Hosp. Asst. Khair-ud-din, apptd. to genl. duty at Gujrat, 24th Nov.

Hosp. Asst. Rahim-ud-din, Jail and Police Hosps., Dharmasala, three months' priv. leave, and was relieved on the 23rd Nov. by Hosp. Asst. Muhammad Jan, Dharmasala Sadar Dispy.

Hosp. Asst. Barkat Ali, Phillour Dispy., Jullundur Dist., three months' priv. leave, and was relieved on the 24th Nov. by Hosp. Asst. Kamal-ud-din, transferred from the Jullundur Civil Hosp.

Hosp. Asst. Bisanada Ram resumed charge of Shorkot Dispy., Jhang Dist., 5th Dec., relieving Hosp. Asst. Fazl Iahi, apptd. to duty in the Jhang Dist.

Surgn.-Capt. J. S. Lumsden made over Dera Ismail Khan Jail to Surgn.-Maj. J. Shearer, 1st Nov.

Surgn.-Maj. J. A. Neils, made over Abbottabad Jail to Surgn.-Col. J. T. B. Bookey, 15th Nov.

Surgn.-Maj. S. E. Bigger made over Kohat Jail to Surgn.-Capt. B. J. Shingh, 15th Nov.

Surgn.-Lieut.-Col. J. T. B. Bookey made over Abbottabad Jail to Surgn.-Capt. F. H. Ozard, 29th Nov.

Surgn.-Capt. B. J. Singh made over Kohat Jail to Surgn.-Capt. A. T. Bown, 4th Dec.

Surgn.-Maj. J. Shearer made over Dera Ismail Khan Jail to Surgn.-Maj. G. S. Griffiths, 6th Dec.

Surgn.-Maj. G. S. Griffiths assumed charge of the civil med. duties of Dera Ismail Khan on the 6th Dec., relieving Surgn.-Maj. J. Shearer.

Surgn.-Capt. A. T. Bown assumed charge of the civil med. duties of Kohat on the 4th Dec., relieving Surgn.-Capt. B. J. Shingh.

MADRAS GOVERNMENT.

Surgn.-Maj. Clement Mallins, M.D., to act as Inspr. of Vaccination and Depy. San'y. Commr., Madras, during the absence of Surgn.-Capt. W. B. Bauman on leave.

Surgn.-Lieut.-Col. T. C. H. Spencer, I. M. S. Madras, has been permitted to retire from the service, 31st Dec. 1894.

Surgn.-Capt. D. Simpson, further extension of leave on med. certificate for two months.

Surgn.-Maj. W. H. Neilson, M.B., I. M. S. (Madras), Med. Officer of the Erinpura Irregular Force, to office, as Agency Surgn., Alwar, from date of assuming charge, and during the absence on furlough of Surgn.-Maj. A. S. Faulkner.

Surgn.-Capt. C. F. Fearnside, Acting Dist. Medical and San'y. Officer, Cuddapah, priv. leave for one month, 10th Dec.

BOMBAY GOVERNMENT.

The following promotions are made in the Apoth. Branch of the Sub. Med. Dept.—

Sub-Ast. Apoth. Nicholas Martin, to be Asst. Apoth., 2nd grade, 14th Jan. 1893, *vice* Mr. Joseph DeMonte, deceased.

Sub-Ast. Apoth. J. M. Nunes, to be Asst. Apoth., 2nd grade, 3rd June 1893, *vice* Asst. Apoth. C. Hudson, promoted.

Sub-Ast. Apoth. S. Simoes, to be Apoth. 2nd grade, 4th March 1894, *vice* Asst. Apoth. S. Carvalho, promoted.

Sub-Ast. Apoth. L. D'Souza, to be Asst. Apoth., 2nd grade, 8th March 1894, *vice* H. T. Corke, resigned.

Sub-Ast. Apoth. Denis Crumly, to be Asst. Apoth., 2nd grade, 12th March 1894, *vice* Asst. Apoth. Sorabji Nusservanji, promoted.

Sub-Ast. Apoth. H. F. G. Kinsley, to be Asst. Apoth., 2nd grade, 18th April 1894, *vice* Asst. Apoth. A. G. Cazalet, promoted.

The following promotions are made among Asst. Surgns. of the Indian Sub. Med. Dept.—

Asst. Surgn. John Alexander Judd, from 2nd class to the 1st class, 24th June 1894, *vice* L. Soares, deceased.

Asst. Surgn. L. A. D'Souza from 3rd class, to the 2nd class, 24th June 1894, *vice* J. A. Judd, promoted.

Asst. Surgn. Joaquim Emanuel D'Souza, from 2nd class to the 1st class, 6th July 1894, *vice* C. H. Bell, deceased.

Asst. Surgn. Arthur Victor Marshall King, from 3rd class, to the 2nd class, 6th July 1894, *vice* J. E. D'Souza, promoted.

Asst. Surgn. George Archibald Deane, from 3rd class, to the 2nd class, 7th July 1894, *vice* W. C. A. Desmire, deceased.

Asst. Surgn. Claude Benjamin Pollock, from 3rd class, to the 2nd class, 24th Sept., *vice* Lieut. Peter Barrett, dismissed.

Surgn. Lieut.-Col. F. O. Barker, M.D., F.R.C.S.I., on relief by Brig.-Surgn. Lieut.-Col. S. O. B. Banks, F.R.C.S.I., to resume charge as Med. Offr. to the Kathiawar Political Agency and in charge of the West Hosp., Rajkot.

Surgn.-Capt. H. Herbert, F.R.C.S., on relief by Surgn. Lieut.-Col. Barker, to resume charge of appointment as Civil Surgn., Kaira.

Surgn.-Capt. J. L. T. Jones, M.B., on relief by Surgn.-Capt. Herbert, to act as Civil Surgn., Broach, pending further orders.

Asst. Surgn., Peter Barretto, 1st class, to be Senr. Asst. Surgn. with the hon. rank of Surgn.-Lieut., 18th April.

Asst. Surgn. N. K. Kallianwalla, L.M. & S., to act as Demonstrator of Anatomy, Grant Med. Coll., 1st Nov., *vice* Asst. Surgn. Anna Moreshwar Kunte on leave.

Brig.-Surgn. Lieut.-Col. C. T. Peters, M.B., acting Civil Surgn., Satara, priv. leave for two months.

Surgn.-Maj. R. Manser, M.D., acting Senr. Med. Offr., J. J. Hosp., furlough from 22nd Dec. 1894 to 15th Nov. 1895.

Asst. Surgn. Phiroosha Palanji Mullin, L.M. & S., to act as Civil Surgn., Ratnagiri, until relieved by Surgn.-Maj. J. Crimmin, V.C.

Surgn.-Maj. R. W. S. Lyons, M.D., to act as First Physician, J. J. Hosp., *vice* Surgn.-Maj. R. Manser, M.D.

Asst. Surgn. Abdul Ghaani Hakim, L.M., is promoted from the 2nd to the 1st class of Asst. Surgns., 19th Nov.

Asst. Surgn. Erachji Sheriarji Bharucha, L.M. & S., has been apptd. sub. *pro tem* Asst. to the Med. Offr., Kathiawar Political Agency, and in charge of the West Hosp., Rajkot, *vice* Asst. Surgn. F. T. Davar.

Surgn.-Maj. F. F. MacCartie, M.B., B.C.M. (Dub.), on return from furlough to take up his appointment as Health Offr. of the Port of Bombay.

Surgn.-Maj. J. Crimmin, V.C., on relief, to take up his appointment of Civil Surgn., Ratnagiri.

Asst. Surgn. Darabhai Edalji Kothavala, L.M. & S., to act as a Teacher in the B. J. Med. School, Ahmedabad, 29th Nov., *vice* Asst. Surgn. N. K. Kalyanavala, L.M. & S., transferred to Bombay.

Asst. Surgn. Jivram Allimchand Lalvani, L.M. & S., to act as Teacher of Surgery and Midwifery at the Med. School, Hyderabad, 29th Nov., *vice* Asst. Surgn. John Eugene Bocarro L.M. & S., granted leave.

CENTRAL PROVINCES GOVERNMENT.

Surgn.-Capt. C. N. Penney and S. A. C. Dhillon respectively made over and assumed charge of the office of Civil Surgn., Chanda, 5th Dec.

Civil Hosp. Asst. Syed Abdul Asia, of the Civil Station Disp., Nagpur, is transferred to the Murwara Branch Disp., Jabulpore Dist., *vice* Civil Hosp. Asst. Ram Krishna Appaji, appointed to the Civil Station Disp., Nagpur.

Civil Hosp. Asst. Syed Ballar, on return from leave, to do duty under orders of the Civil Surgn., Raipur.

Civil Hosp. Asst. Ram Krishna Appaji, on return from leave, to do duty under orders of the Civil Surgn., Jabulpore, 17th May.

Civil Hosp. Asst. Baghunath Tukaram, of the Raj-Nandgaon State Disp., is appointed to the Central Jail Hosp., Jabulpore, *vice* Civil Hosp. Asst. Gokul Pershad directed to do duty under orders of the Civil Surgn., Jabulpore.

Civil Hosp. Asst. Abdul Ramak Khan, doing duty under orders of the Civil Surgn., Chanda, is appointed to the Mul Branch Disp., Chanda Dist., *vice* Civil Hosp. Asst. Shait Karim Bux, who retires from the service.

Three months' priv. leave is granted to Civil Hosp. Asst. Abdul Karim, attached to the Deoli Branch Disp., Wardha Dist., 8th Dec.

Civil Hosp. Asst. Ujagar Pershad, doing duty under orders of the Civil Surgn., Nagpur, is temply. posted to the Deoli Branch Disp., Wardha Dist., *vice* Civil Hosp. Asst. Abdul Karim.

Civil Hosp. Asst. Luchman Pershad, doing duty under orders of the Civil Surgn., Nagpur, is directed to do duty under orders of the Civil Surgn., Narsinghpur.

Two months and four days' priv. leave was granted to Civil Hosp. Asst. Ashfaq Hussain, of the Garhakota Disp., Saugor Dist., 7th Oct. to 10th Dec.

Civil Hosp. Asst. Surji Rao, doing duty under orders of the Civil Surgn., Saugor, did duty at the Garhakota Branch Disp., from the 1st Nov. till the 10th Dec.

Relieved by Civil Hosp. Asst. Ashfaq Hussain, Civil Hosp. Asst. Surji Rao is directed to do duty under orders of the Civil Surgn., Saugor.

Six months' sick leave is granted to Civil Hosp. Asst. Ashmat Ali, of the Jail and Police Hosp., Bhandara, 15th Oct.

Civil Hosp. Asst. Rama Gail, doing duty under orders of the Civil Surgn., Balaghat, is appointed to the Jail and Police Hosp., Bhandara.

Civil Hosp. Asst. Jairam Daulat, of the Main Disp., Bhandara, was directed to do duty at the Jail and Police Hosp., Bhandara, in addition to his own duties, till he was relieved by Civil Hosp. Asst. Rama Gail.

Relieved by Asst. Surgn. Rajoni Kant Das Gupta, on return from leave, Civil Hosp. Asst. Gunga Pershad Singh, temply. attached to the Main Disp., Bilaspur, is directed to do duty under orders of the Civil Surgn., Bilaspur.

N.-W. P. AND OUDH GOVERNMENT.

Asst. Surgn. Binode Bihari Ghose, in charge of the Chander Disp., Mirzapur Dist., priv. leave for ninety days, 7th Jan. 1895.

Hosp. Asst. Muhammad Boshan, of the reserve list, to the charge of the Husalnabad Disp., Lucknow, *vice* Asst. Surgn. Ghulam Mustafa, granted priv. leave.

The undermentioned Asst. Surgns. of the Provincial Staff of the N.-W. P. and Oudh, having successfully passed their septennial professional exam., are promoted to the first grade from the dates specified against their names—Jwala Prasad, 1st Nov., and Bihari Krishna Rana, M.A., 3th July.

BURMA GOVERNMENT.

Mr. H. Wells, M.B., C.M., who has been temply. admitted to the Unconvenanted Med. Service, is posted as Civil Surgn. of the Buby Mines, *vice* Asst. Surgn. F. Bradley, transferred from Mogok to Tiddim to be Civil Surgn.

Surgn.-Capt. J. W. Wolfe, leave extended by two months and 12 days.

Surgn.-Capt. R. H. Caator, from Yamethin to Rangoon to offic. as Secy. to the Insptr.-Genl. of Jails, with civil med. administration, *vice* Surgn.-Capt. J. W. Wolfe.

Surgn.-Capt. T. W. Stewart is transferred from Meiktila to Yamethin as Civil Surgn.

Asst. Surgn. R. H. Nailer, on return from priv. leave, is posted to Pakokku as Civil Surgn. *vice* Asst.-Surgn. J. T. Weston, on leave.

Privilege leave for 52 days is granted to Asst.-Surgn. J. T. Weston, 11th Nov.

Ast. Surg. F. X. de Attalides, on three months' priv. leave, made over, and Mr. H. J. Augustine assumed charge of the Civil Surgeoncy, Myitkyina, 23rd Oct.

Hosp. Asst. Jan Mahomed left Civil Hosp., Kindat, and assumed charge of the Police Hosp., Mandalay, 15th Nov.

Hosp. Asst. D. P. deSouza assumed charge of the Police Hosp., Bhamo, 24th Oct.

Hosp. Asst. Prem Dass left Police Hosp., Bhamo, and assumed charge of the Outpost Hosp., Sikaw, Bhamo Dist., 17th Nov.

Hosp. Asst. Abius Sattar, on three months' priv. leave, left Police Hosp., Rangoon, 27th Nov.

Hosp. Asst. Shaik Abdulla assumed, as an additional duty, charge of the Police Hosp., Rangoon, 27th Nov. *vice* Hosp. Asst. Abius Sattar.

Hosp. Asst. S. Paul, on return from leave, assumed charge of the Civil and Police Hosps., Sagaing, 1st Dec.

Hosp. Asst. S. Paul assumed, as an additional duty, charge of the Lock-up, Sagaing, 1st Dec., *vice* Hosp. Asst. S. Chinnaswamy Naidu.

Hosp. Asst. Ahmed Khan, on return from leave, assumed charge of the Police Hosp., Mandalay, 1st Dec.

Hosp. Asst. T. J. Padmanatha made over, and Hosp. Asst. N. Vijayaraghawa Moodelly assumed, in addition to his own duties, charge of the Civil Dispy., Loikaw, Southern Shan States, 1st Oct.

Hosp. Asst. Badha Nath Sing left Jail Hosp., Mandalay, and assumed charge of the Police Hosp., Bhamo, 17th Oct.

Hosp. Asst. Badha Nath Singh, on transfer to Mogaung, left Police Hosp., Bhamo, 20th Oct.

Hosp. Asst. Raghunatha Singha left Police Hosp., Bhamo, and assumed charge of Mogaung, as a reserve for escort duty, 16th Nov.

Hosp. Asst. Maula Baksh left Police Hosp., Monywa, and assumed charge of the Outpost Hosp., Zeitlaung, Lower Chindwin Dist., 24th Nov.

Hosp. Asst. M. S. Munisawmy Naidu is granted an extension of leave for three days, 12th Nov.

Hosp. Asst. A. Koihaudaramasawmy Naidu left Outpost Hosp., Mawlu, and assumed charge of the Police Hosp., Katha, 24th Nov.

Hosp. Asst. T. J. Venkatchellam Naidu left Jail Hosp., Mandalay, and assumed charge of the Ry. Dispy., Pynmaua, 30th Nov.

Hosp. Asst. Rajab Ali, extension of six months' leave, 1st Nov.

Hosp. Asst. S. Chinnasawmy Naidu left Civil and Police Hosp., Sagaing, and assumed charge of the Civil Hosp., Pynmaua, 5th Dec.

Hosp. Asst. S. Chinnasawmy Naidu assumed as an additional duty charge of the Police Hosp., Pynmaua, 5th Dec., *vice* Hosp. Asst. R. S. Deshmookha.

Hosp. Asst. Ahmed Khan left Police Hosp. and assumed charge of the Jail Hosp., Mandalay, 4th Dec.

Hosp. Asst. P. Govindarajoo Moodelly left Police Hosp., Minbu, and assumed charge of the Civil Dispy., Pakokku, 26th Nov.

Hosp. Asst. Heeml Shariat assumed charge of the Police Hosp., Momeik, Ruby Mines Dist., 29th Nov.

Hosp. Asst. Syed Abdul Gunny left Ry. Dispy., Pynmaua, and assumed charge of the Genl. Hosp., Mandalay, 3rd Dec.

G. O. C. C.

The undermentioned passed the Lower Standard in Pushtu, 28th Sept. 1894:—Surgn.-Capt. E. Wilkinson and Surgn.-Lieut. H. G. Melville, I. M. S.

Native Mily. pupil Kanhaiya Lal having passed his final exam. is admitted into the service as Sub. Hosp. Asst., 1st Oct.

Surgn.-Lieut.-Col. F. W. Wright, D.S.O., from the med. charge of the 43rd Gurkha Rifles, to the charge of the 6th Beng. Infy., *vice* Surgn.-Capt. R. C. Macwatt.

Surgn.-Lieut. Col. W. A. Murphy, D.S.O., from the med. charge of the 2nd Battn., 2nd Gurkha Rifles, to the charge of the 1st Battn., 2nd Gurkha Rifles, *vice* Surgn.-Lieut.-Col. A. M.M. Paterson.

Surgn.-Maj. A. Duncan, from the med. charge of the Corps of Guides and offg. med. charge of the 1st Battn., 3rd Gurkha Rifles, to the charge of the 2nd Battn., 2nd Gurkha Rifles, *vice* Surgn.-Lieut.-Col. W. B. Murphy, D.S.O.

Surgn.-Lieut.-Col. J. T. B. Bookay, from the med. charge of the 6th Punjab Infy. to the offg. charge of the 1st Battn., 5th Gurkha Rifles, *vice* Surgn.-Maj. J. A. Nelis.

Surgn.-Capt. F. H. Burson-Brown, to the med. charge of the 43rd Gurkha Rifles, *vice* Surgn.-Lieut. Col. F. W. Wright.

The undermentioned passed the Higher Standard in Pushtu on the 29th and 30th Oct. 1894:—Surgn.-Capt. H. B. Cleveland, I. M. S., and Asst.-Surgns. B. T. Rodgers and C. J. Fox.

ASSAM GOVERNMENT.

Sick leave for three months is granted to Hosp. Asst. Kailas Chandra Das (II), in charge of Jagi Dispy., Nowgong Dist., 5th Dec.

Hosp. Asst. Afzal Husain, a superny. in the Nowgong Dist., is appointed to the Jagi Dispy., 5th Dec., *vice* Hosp. Asst. Kailas Chandra Das (II).

The services of Surgn.-Capt. C. Duer, M.B., F.R.C.S., I.M.S. (Beng.), Offg. Civil Surgn., Goalpara, are placed at the disposal of the Govt of India, Home Dept.

Asst. Surgn. Pramatha Nath Banerji is apptd. temply. to hold civil med. charge of the Naga Hills Dist., in addition to his own duties, 6th Dec.

Hosp. Asst. Bipin Behari Datta, a superny. in the Lakhimpur Dist., is apptd. to the med. charge of the Bomjor outpost in that dist., 18th Oct.

DOMESTIC OCCURRENCE.

BIRTH.

GRAYFOOT.—On 14th December at Bandora Hill, Bombay the wife of Surgn.-Capt. B. B. Grayfoot, I.M.S., of a daughter

ACKNOWLEDGMENTS.

We acknowledge with thanks, receipt of the following: *Journals*.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjinia Tibabat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Scalpel—Indian Journal of Pharmacy.

Gazettes of the Governments of India, N.-W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika.—The Sentinel—India—Punjab Patriot—Indian World.

Literary Contributions and Letters from:—Surgn.-Col. Robert Harvey, M.D., F.R.O.P., F.R.C.P., F.H.S., D.S.O., Calcutta; Surgn. Lieut.-Col. Alexander Crombie, M.D., I. M. S., Calcutta; Surgn. Lieut.-Col. Edward Lawrie, M.B., M.R.C.S., Calcutta; Lal Madhub Mookerjee, Rai Bahadur, I.M.S., F.R.C.S., Calcutta; William Huntly, M.A., M.D., B.S.C., Rajputana; Surgn.-Genl. Sir William James Moore, K.C.I.S., M.R.C.S., Eug. L.R.C.P., Edin., L.S.A., Lond.; Alf. McCabe Dallas, L.M. Dub., L.R.O.P.L., &c. Kambhair; Joseph Benjamin, Med. Practitioner, Ahmedabad; Surgn.-Capt. Patrick Hehir, M.D., F.R.S., Hyderabad; John Morton, M.D., L.R.C.P. & S., Edin., Massoree; Ed. Lerede Chaitke, M.D., D.M., L.F.P.S. Giza, Berhampur; Hari Kali Sen, V.L. M.S., Dinajpur; and others.

Original Articles.

A REVIEW OF INDIAN PHARMACOLOGY.*

By RAI BAHADUR KANNY LALL DEY, C.I.M., F.C.S., G.M.C.B.

Being the Address of the President of the Section of Pharmacology at the Indian Medical Congress.

The immortal DARWIN concluded one of his most exhaustive monographs with the words:—"We only see how little has been made out in comparison with what remains unexplained and unknown." This is exactly my feeling to-day in attempting to place before you a brief review of the subject which I have made a study for more than forty years.

I am fully conscious of the responsibility attached to the office to which you have done me the honor to elect me, and I trust that you may not be disappointed in my fulfilment of these responsibilities. I am becoming more and more reconciled to the fact that advancing age constrains me to leave this legacy of work undone to younger and abler men, but I shall endeavour in the time at my disposal to lay before you a sketch of the Progress of Pharmacology in India with some suggestions for the possibilities of its future.

It may not be unprofitable to glance for a moment at the ancient *Sanskrit Materia Medica* of a time long preceding the advent even of Mohammedanism into India over seven centuries ago. I have quite lately found great pleasure and no small instruction in a research into the old Sanskrit works dealing with the classification of vegetables and the utilisation of their parts in medicine as practised by the physicians of India of the Puranic era some thirteen centuries ago. The elaborate directions for the collection of drugs and their subsequent manipulation is, strange as it may seem to European minds at least, not by any means unworthy of the methods of to-day, and you will perhaps be astonished to learn, as I was to find, that some of the mistakes of the most ancient of these Sanskrit writings survive in some of the best books treating of the indigenous drugs of India at the present time. They shew the great progress which the ancient Hindus had made in the healing art. Minute instructions were given on every conceivable point, such as the gathering of herbs, preparation of medicines, etc. Annual plants were to be collected before the ripening of the seed, biennials in the spring, and perennials in the autumn: twigs were to be of the current year's growth: the roots to be collected in the cold season: the leaves in the hot season and the barks and woods in the rains. There were no fewer than twenty-six forms of medicine, including powders, extracts and boluses, decoctions and infusions in water and milk, syrups, expressions, distillations, fermentations, and medicated oils, many of them crude enough in their exhibition, but wonderfully efficacious in the respective ailments for which they were designed.

Not, however, until the quickening influence of British supremacy had been fully established in India was any notable attempt made of which there is any record, to improve or to augment what was already known of the medicinal resources of this country.

SIR WILLIAM JONES' "Botanical Observations on Select Indian Plants," was one of the earliest contributions in this direction: JONAS FLAMINO's "Catalogue of Medicinal Plants" (1810); ANSLEY's "Materia Medica of Hindustan" (1818 and 1826); ROXBOROUGH's "Flora Indica" in 1820, and the labors of WALLICH, BOYLE, and later of DR. F. J. MOUTAT and F. N. MACNAMARA and other ardent botanists did much towards resolving the chaos in which they found the vast mass of material at their disposal into some degree of scientific arrangement.

The gradual progress of Indian Pharmacology, the widening and deepening of its influence, and its possibilities in contributing to the health and consequent prosperity of this vast Empire have been in complete sympathy with the gradual development of commerce, medicine and science in this country. Clear of the mythology and superstition from which it evolved, not unlike the medical science of Europe, but which lingers still in India, the science has in some measure at least demonstrated the marvellously liberal provision of curative and remedial agents within the reach of the teeming millions of this Empire. Following O'SHAUGHNESSY's *Bengal Pharmacopœia* (1844), the publication of the *Pharmacopœia of India* (1868) under the editorship of DR. WARING, signalled a new epoch in establishing the value of indigenous medicinal products. The more important were stamped with some measure of official recognition, a preliminary step to the ultimate adoption of several in the *British Pharmacopœia*, a distinction of which many more—as I shall hope to shew—are equally worthy. DR. MOORE'S SHERIFF's "Supplement to the Pharmacopœia" published in the following year added very materially to the usefulness of that work, and DR. U. C. DUTT's translation of "Sanskrit Materia Medica" enriched this department of medical science in no inconsiderable degree. The painstaking labors of FLOCKNER and HAMBURY, as embodied in the *Pharmacographia*, were of incalculable value in recording some most important material relating to the medicinal products indigenous to British India. Among recent authors the work of the late lamented DYMOCK has been perhaps the most valuable. His "*Materia Medica of Western India*" (1883) was a most careful compilation, while his later work, *Pharmacographia Indica*, in joint authorship with WARREN and HOPPER, is an admirable emulation of its almost perfect prototype.

The comprehensive "Dictionary of the Economic Products of India" by my honorable colleague in the Presidency of this section of the Indian Medical Congress, DR. GEORGE WATT, combines a condensation of the literature of the subject with all the information it has been possible to secure through official and other sources. MR. T. N. MUKERJI, of the Imperial Museum, Calcutta, has by the genuineness of his work in this department of science and his painstaking attention to details, come to be recognised as an authority on all matters relating to the indigenous drugs of India. Another earnest worker in this department at present is Surgeon-Captain B. D. BASU. This science is also greatly indebted to MR. THOMAS CHRISTY, F.L.S., London, for his unremitting exertion to discover the value of and to introduce new drugs to the commercial world.

* Sent by author for publication in Record.

International Exhibitions in different parts of the world, and the invitations to the Indian Government to prepare exhibits, infused fresh impetus into the somewhat commonplace researches into the medicinal resources of this country.

Thus attempts have been made to separate the wheat from the tares. The literature on the subject is voluminous, tending even in the best and most recent works towards reproduction and the repetition, as I have already pointed out, of statements that should long ago have been relegated to the oblivion whence they originated. In a new edition of my own little work (published originally in 1867), on the "Indigenous Drugs of India," now in the press, the advance sheets of which I have the honor to lay before you, I have tried to remedy these defects as far as possible, to remove the errors and mistakes into which writer after writer had fallen, by copying and quoting one after another, to prove all and hold fast the good.

If we look now for results, we will find that materia medica as a science has benefitted materially from these researches, that the *armamentaria* of the unprejudiced physician has been increased with advantage, helping to raise medicine in some small measure at least out of the mire of empiricism. The medicinal properties and uses of these munificent gifts of Nature have become better known among the people, and drugs that before were confined to districts, have spread to larger and more needy areas. But while the example of Government is to be taken as our criterion in many instances, it is not so in this particular case. It is surely a reproach that in the latest list of medical stores for hospitals in Bengal only one country medicine—the herb *chiretta*—appears. This surely reflects either on the internal or external administration of the Medical Store Department.

It is in view of such considerations as these that I would endeavour to offer some practical suggestions as to how the more important of our indigenous drugs may be dealt with, not merely as indifferent substitutes for European products, but each as filling a place of its own in point of usefulness and therapeutic value. The first consideration is that of *Identification*. This will remain a prime difficulty until certain prominent characteristics of each drug become established, as no amount of verbal description will enable the non-botanical mind to identify some plants and parts which even in themselves do not invariably present quite the same characters. The ease and cheapness with which almost all the drugs of this country are to be obtained, will be facilitated greatly with the help of the vernacular names peculiar to each district, as also of the professional castes who deal in these substances, the *Musheras* of Central and Upper India, the low caste *Maulas*, *Bagdis*, *Kaibartias*, *Pods*, *Chaudalas*, *Kaoras*, and *Karangs* of Bengal and the *Chandras*, *Bhils*, and *Gamias* of Bombay. These humble communities of the several Presidencies of India can render immense service to medical men in supplying medicinal plants. This fact was fully recognised by Sir WILLIAM JONES, the President and founder of the Asiatic Society of Bengal. In the second volume of his "Botanical Observations of Select Indian Plants" he wrote:—

"I am very solicitous to give Indian plants their true Indian appellations; because I am fully persuaded, that LINNÆUS himself would have adopted them, had he known the learned and ancient language of this country. * * * Far am I from doubting the great importance of perfect botanical descriptions; for languages expire as nations decay, and the true sense of many appellatives in every dead language must be lost in a course of ages; but as long as those appellatives remain understood, a travelling physician who should wish to procure an Arabian or Indian plant, and without asking for it by its learned or vulgar name, should hunt for it in the woods by its botanical character, would resemble a geographer, who, desiring to enquire by name for a street or a town, waits with his tables and instruments for a proper occasion to determine its longitude and latitude."

The suggestion herein conveyed has been carried into effect in such names as *Athrocaphalus Cadamba* and *Cedrus deodara*, but it is to be regretted that it has not been possible to widen the system in the nomenclature of plants peculiar to India.

Botanically, many of the doubtful points relating to the plants yielding these drugs have been set at rest for ever in Sir JOSEPH HOOKER's colossal work on the Flora of British India, now completed in all but the grasses, while the indexed collections of authentic specimens which are in process of formation at the Imperial Museum, Calcutta, and the Imperial Institute, London, to which the Dictionary of Economic Products is to form the catalogue and key, will, when complete, facilitate the identification of these products for commercial purposes. All the well-oiled machinery of this official mill, however, will not familiarise our acquaintance with native medicines, so that we leave the theoretical and move into the practical. I would suggest a further step in the establishment of facilities for the supply of reliable preparations for immediate use by physicians. It is vain to expect medical officers to assume the rôle either of botanists or druggists. That is a condition of things which has long gone by. I have to suggest, therefore, that the medical storekeepers of our respective presidencies should be asked to make some definite pharmaceutical preparations at their respective laboratories for distribution to the various hospitals and dispensaries for trial and report. In this way a step would be made towards their practical utilisation, while the advisability or otherwise of their replacing costly imported drugs could be most readily determined. Absolute dependence ought not to be placed on individual opinion, for such may be formed from preconceived notions or may be affected by influences or considerations which may detract from their real value. Some such arrangement once thoroughly established, however, the great Indian Medical Service will be a source of unlimited blessing to the people and will be independent of the *in-uses* and the *out-uses* and the innumerable synthetical monstrosities of these latter days. The particular class of preparation I would favor is the general one of *fluid extracts* as originated in the United States Pharmacopœia, one part of the product representing one part of the original drug operated upon. They present the advantages of portability, permanence and adaptability, with concentration and uniformity. I have myself made several experiments in this direction, the results of which I have the honor to present for your inspection. I am persuaded

that the future of Indian Pharmacology depends largely on considerations such as I have indicated to you.

The next important point is the commercial aspect of this question. The Government of India has encouraged with a liberality beyond all precedence, the cultivation of medicinal plants suited to India, and the experimental cultivation of others which have proved to be unsuitable to the soil. The result has been, on the one hand, that the cinchona industry of the world has been completely revolutionised, ruined, some will say, while on the other, thousands of rupees have been spent to practically no purpose in the attempt to establish ipocacuanha. The time has now come for laying out Medicinal Plant Farms in the districts most suited to the drugs which it is proposed to grow. There is enough belladonna on the Himalayas to supply the world, which, if transplanted, and carefully cultivated, would surely at least save India the necessity, if not the cost, of importing this among many other drugs which might similarly be grown. The gardens for medicinal plants and essential oils of Germany and Belgium are sufficient evidence of the success attending such enterprise. Another most desirable step which would follow this in natural sequence, would be the establishment of a drug emporium for India. This for obvious reasons would be most practically effected at Calcutta. A class of drug brokers would arise, whose business it would be to encourage the systematic collection of drugs for export to the great markets of Europe, Australia, and America. The sorting of the drugs into their various qualities could be effected quite as easily in Calcutta as in the London market, and the present anomalous position of the Indian druggists importing drugs which have already been shipped from India will be done away with. There are thousands of tons of valuable roots and flowers, and fruits and fibres rotting in the jungles every year for want of a proper market in which to have their approximate values appraised. Nor even on the Himalayas are they so very inaccessible. The gentian grubbers of the Alps spend weeks at a time far away from their homes collecting for the market. Some of the medicinal plant farmers about Brussels employ 500 collectors—whole families—who go out into the surrounding districts and collect the drugs which they prepare for the markets of the world. With the cost of labor at a minimum in India and material in profusion, success in some corresponding degree is assured. The ever-improving railway communication should afford a great impetus to such an industry, which I am confident would in time become one of considerable importance to the people of India.

Above all I would appeal to my countrymen to be honest. It is unfortunately too true that the art of sophistication and adulteration as applied to almost every commodity produced in India, has served to weaken the faith even of our own countrymen in what we are accustomed to call "country products." There are certain branches of industry, it must be admitted, where this process of sophistication provides quite an art of no little importance, but I ask is this sufficient compensation for a diminished faith and consequent depreciation in value, in our exports to European markets? I do not say that we are even approaching in ingenuity

to that country which created the "woolen suitings," but I hold that the success of all that I anticipate for the indigenous drugs of India depends upon this consideration. If I may present one or two instances in the brief space now at my disposal, I would remind you that *Cannabis indica* has lost a very considerable portion of the reputation it once had in European practice on account of the fact that it is not of the same standard of quality that it was in former years. Similarly, the bark of *Holarrhena antidysenterica*, the *kurchi*, is losing its undoubted position as a specific in dysentery through the substitution of worthless barks. The aconites are equally unreliable.

Among the most important of the drugs exported at present are: *Aconitum ferox*, nux vomica, Indian opium, bael, hemidesmus and Indian hemp, while among others which might form equally important articles of export are belladonna, taraxacum, podophyllin, jalap (*Ipomoea turpethum*), *Holarrhena antidysenterica*, gurgjun, chaulmurga, isaphgul.

I am hopeful that considerable encouragement will be afforded to the better appreciation of our indigenous drugs by the fact that some are likely to be included in the proposed Imperial Pharmacopœia.

In a paper which I prepared for the International Pharmaceutical Congress held in London in 1881, and which was presented on my behalf, I suggested several drugs as worthy of inclusion in a proposed revision of the *British Pharmacopœia*. These suggestions are embodied in the following list:—

| SCIENTIFIC NAME. | POPULAR NAME. | PROPERTIES. |
|--------------------------------------|-------------------------|----------------------------------|
| <i>Adhatoda Vesica</i> .. | .. <i>Bakas</i> .. | An Expectorant. |
| <i>Andropogon Paniculata</i> .. | .. <i>Creat</i> .. | Feverifuge. |
| <i>Azadirachta Indica</i> .. | .. <i>Nim</i> .. | Bitter Tonic and Anti-periodic. |
| <i>Calotropis Gigantea</i> .. | .. <i>Madar</i> .. | In <i>Rozema</i> . |
| <i>Carica Papaya</i> .. | .. <i>Papaya</i> .. | Source of <i>Papain</i> . |
| <i>Dipterocarpus Turbinatus</i> .. | .. <i>Gurgjun</i> .. | Substitute for <i>Copallin</i> . |
| <i>Garcinia Mangostana</i> .. | .. <i>Mangosteen</i> .. | Astringent. |
| <i>Gynostemma Odorata</i> .. | .. <i>Chaulmurga</i> .. | In <i>Leprosy</i> . |
| <i>Holarrhena Antidysenterica</i> .. | .. <i>Kurchi</i> .. | Specific in Dysentery. |
| <i>Psoralea Corylifolia</i> .. | .. <i>Dabchee</i> .. | In <i>Leucoderma</i> . |
| <i>Symplocos Baccifera</i> .. | .. <i>Lodhra</i> .. | In <i>Menorrhagia</i> . |

I have now attempted in the brief space at my disposal to place before you some of my views and some of my expectations which, in my old age, I cannot hope to see realised, but which, in the best interests of the great Oriental Empire of Her Majesty Queen Victoria, I venture to hope may be furthered in some measure by this Indian Medical Congress.

SHEEP'S THYROID IN GRAVES' DISEASE.

DREYFUS-BRISAL claims that thyroid treatment is not equally suited to every one suffering from Graves' disease, as it often aggravated the symptoms, and BECLERE reported a like experience, but J. VOISIN obtained excellent results in a female aged 32, suffering from Graves' disease, and to whom he prescribed 6 to 8 grammes (i.e., 93 to 124 grains) of sheep's thyroid daily, suspending treatment for ten days in every three weeks. Improvement began after a fortnight of this treatment, the heart beats becoming equal: fell from 150 to 100 per minute, the edema of the lower limbs disappeared, and the exophthalmos and enlargement of the thyroid appreciably diminished. There has been no relapse and the improvement progressed so much that, beyond a trifling swelling of the neck and very slight exophthalmos, no other symptoms of the disease can be observed.

HILL DIARRHOEA, ITS ETIOLOGY, PATHOLOGY, SYMPTOMS AND TREATMENT.

By Surgeon-Major A. ADAMS, M.D., I.M.S.

Chief Medical Officer, Rajpootana.

Definition.—An obstinate form of diarrhoea characterised by copious pale, liquid, frothy motions, is met with at all hill stations in India, and is known as hill diarrhoea.

Etiology and Pathology.—Exposure to damp night air or any chill-producing condition, in high altitudes in warm countries, gives rise to this form of diarrhoea, in constitutions relaxed by weak digestion, malaria, long residence in the heated plains, or by anything which depresses the vasomotor centres and lowers vitality. The rarer and cooler atmosphere of great elevations, acting on the relaxed skin and cutaneous nerves of such individuals, suppresses perspiration and drives the blood to the viscera. The clogged digestive glands pour out deteriorated secretions which fail to produce the proper materials of alimentation, and the intestinal canal takes on a vicarious action to remove the fluids which should have been excreted by the skin. Under these morbid conditions of the alimentary system, the saprophagenous bacilli and fungi indigenous to that region, take on unusual activity, multiply inordinately and form poisonous ptomaines which irritate the mucous membrane of the intestines, hinder absorption, and have to be thrown off with the semi-digested food and other excreta.

Malaria and defective pancreatic secretion have been assigned as the causes of this malady. Hill diarrhoea is however more common during the damp weather of the early monsoon than in the fever season, which follows the rains, and there is no indication that the pancreas is more affected than the rest of the chylipoietic organs.

Symptoms.—This disease is more common among new arrivals than among the old residents of hill stations. It generally begins with two or three light coloured, copious, liquid frothy motions, daily, or it may be ushered in by bilious vomiting and purging, after which the motions take on the above characteristics. On assuming the erect position in the early morning or on taking food or drink, one of these motions is voided, this is accompanied by a sense of relief, and is without pain or straining. The patient feels languid and distended, and although the appetite is generally fair, there is a want of satisfaction when food has been taken, much flatulence and diminished confidence in the sphincters are experienced, which make solitude desirable. The skin is shallow and shrunken the tongue furred and generally yellow, the pulse soft and weak, the liver slightly congested and sometimes tender on pressure. The extremities are usually cold, and emaciation sets in early on account of the rapidity with which the fluids are removed from the tissues. When the disease is protracted the motions become more frequent and watery, fever, dysentery, or oedema may supervene, or the sufferer may sink from exhaustion consequent on malnutrition.

Treatment.—The indications for treatment are, to restore the action of the skin and liver, disinfect the bowel and destroy the active bacilli, stop the alvine excretions and aid the digestive secretions. Time should not be lost, as this disease is much more tractable in the early stage.

The patient should be confined to the house, and bed if the symptoms be severe. The body and extremities should be kept warm, a peptonised milk diet should be adhered to if milk can be taken, otherwise broths, soups, light puddings and toast, and papain or symine should be given regularly. A glass or two of sound port should be allowed to those accustomed to stimulants, but large drinks of hot or very cold fluids should be interdicted, also meat and solids generally.

The salts of mercury are among the most patent drugs in the treatment of this disease, and the perchloride is the most efficacious of this group. Salol and Resorcin have both been found to act well in this affection, and I now generally treat cases with 15 or 20 grains of salol three or four times a day, and a bismuth and Dover's powder at bed-time, with excellent results.

The salol destroys the bacilli and disinfects the bowel, the dose of Dover's powder and bismuth at bed-time gives a good night, reduces the peristaltic action of the intestines, soothes and astringes the irritated and congested mucous membrane, and stimulates the action of the liver and skin.

Quinine, nux vomica, and hydrochloric acid make the best tonic in this complaint, and a *sherbut* from fresh bacl fruit is very useful in the chronic stage of the disease. A sea voyage or change to the sea-side will often be found beneficial in protracted recovery.

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RADICAL CURE OF CHRONIC DYSENTERY IN ITS RECURRENT FORM, BY WASHINGS OF THE LARGE INTESTINE WITH A SOLUTION OF NITRATE SILVER AT 1-1000.

BY HENRY GALLAY, M.D.

Surgeon Major for the French Colonies.

I have the honor to lay before you a series of cases which I think and trust will be found to be of the highest interest to all medical officers and practitioners in India:—

The succinct clinical statement of these cases, in fact, shews that it is possible, without much difficulty, by setting aside all the therapeutic substances which are to be absorbed by the stomach, and notwithstanding, allowing the sick persons, to feed themselves as they like, it is possible, I say, to cure old chronic dysentery especially when this disease is assuming the form which is called the *repeating form*. And this result can be obtained simply by performing a daily and continuous series of washings of the large intestine with a solution of which the following is the formula:—

| | | |
|-------------------|-----|------------|
| Nitrate of silver | ... | 1 scruple. |
| Distilled water | ... | 1 litre. |

Case I.—Dr. G., a medical officer, while residing in Tonkin, in 1883, contracted acute dysentery. During four years he had 14 relapses of the same disease, in spite of all known and suitable treatment, in spite of ten months' strict diet, between the sixth and the seventh relapse.

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

It was after the eleventh relapse that Dr. G., following Dr. LE DANTEC's advice, felt inclined to try on his old and tenacious disorder, the washing of the large intestine with the above solution, which washings had already been successfully tried by his eminent friend and colleague against acute dysentery.

Four several times (a series of ten washings each) shewed at each time a period of apparent recovery lasting from forty to fifty days. But with such an amelioration in the general state of health, such a feeling of relief from pains, that the intervals which formerly separated the attacks, and which the patient used to call his periods of quiet, now seemed to him dreadfully unbearable. So after the fourteenth relapse, Dr. G. decided to begin an indefinite series of washings.

This series of washings lasted thirty days, and were then interrupted, Dr. G., having had to leave France. But since leaving Marseilles, the recovery, which he supposed not to be a complete and definite one, has not however, until now, failed (August 1892). Besides, from that day all precautions as to diet have been put aside, recovery being more and more confirmed (7th September 1894).

Case II.—Mr. X., Revenue Officer at Saigon, was suffering for two years from dysentery in a recurrent form. He had tried every sort of treatment. Even in moments of quiet, he suffers and passes mucus through the anus.

At Bordeaux, in June 1892, he underwent a series of twenty washings, and then wrote to me saying that he has never been so well.

In reply, I advised him to repeat the series. Since I have left France I have never heard of him; but what I have learnt from experience, permits me to conclude that he did not require any more aid from me.

Case III.—Miss D., 14 years of age, an Indo-European, had dysentery in April 1892, and was cured in 15 days. But suffers since from constant uncontrolled stools in the morning. Frequent indigestion which gives rise to ejection of mucus and bloody matter, with tenesmus of the anus, sleeplessness, and pains when the flatus passes in the colon.

September 1892.—Series of 20 washings. Complete amelioration. The series was kept up as a precaution, to 50 washings.

September 1894.—The cure has been confirmed up to this time.

Case IV.—Mr. D., Colonial Functionary, had contracted dysentery at Hue in May 1889. Notwithstanding twice returning to France and the use of the waters of Bussang, he was always suffering and was subject every now and again to relapses. He lost 24 lbs. in weight. In January 1893 he began a series of 80 washings with, complete amelioration. In July 1894, two years later, Mr. D. left Pondicherry having regained his weight.

Case V.—Miss X., 18 years, European, had dysentery in 1891 at Hyderabad. Since she has never passed two months without a relapse. In May 1891 she had a series of washings up to 50 only with perfect amelioration. I heard of her a year later, and the cure was maintained.

Case VI.—Rev. Father P., missionary in Tanjore, contracted dysentery in 1890. Since he has had alternately and constantly, constipation and mucous diarrhoea with tenesmus. Series of 80 washings. Complete cure. He has been able to resume his hard work, while he had scarcely any strength at that time, in 1892; and to-day, September 1894, he came to shew himself to me: he is stout, fresh and vigorous.

Case VII.—Mr. P., Controller of Revenue accounts at Pondicherry. Acute dysentery in 1888. Since constant relapses. In July and August 1893, series of only 56 washings. Complete amelioration, which is confirmed now in September 1894.

Case VIII.—Mrs. E., 21 years, European, has had dysentery in a repeating form since the age of 15 years. Greatly weakened. Chlorotic and always suffering. In October 1893, she began a series of 50 washings. Complete cure with ten washings. In June 1894 she went away to Europe, strong and fattened, with an additional weight of 4 pounds and bearing without difficulty the commencement of pregnancy.

I have, of my own account, shortened the clinical description of the above cases, the details being the same for each of them.

Considered, on the whole, they shew the reader that:

By means of sixty washings with ultrate of silver solution, I have succeeded in curing myself from a repeating dysentery which persisted for four years, and that, emboldened by this personal example, I have also succeeded in curing seven other patients from dysentery from one to five years' standing.

I must now indicate the way of proceeding methodically with the antiseptic washings of the large intestine. This method is very important, and the final success or failure depends exclusively on its proper and rational application.

The process I make use of is the same as that indicated some time ago (September 1890), by Dr. LE DANTEC (in *Archives de Médecine Navale*), against acute dysentery.

The patient should lie down on his right side, his left thigh being bent, in short, he will occupy the same position as if a digital exploration of the rectum were to take place.

Keeping this position, first an enema of tepid water destined to empty out, wash and clean as completely as possible the large intestine, will be given.

After evacuating this first washing given for cleanliness, the patient will assume again the same position as before, and then the antiseptic washing will be applied:

| | | |
|--------------------------------|-----|-----------------|
| Nitrate of silver crystallised | ... | 1 scruple. |
| Distilled water | ... | 1 litre. |
| Laudanum | ... | 20 to 30 drops. |

and will try to keep it in for a few minutes. Two, three or five minutes are the maximum.

It is proved by numerous experiments made on dead bodies that to fully ensure the washings of the colon up to the coccum, one litre at least of liquid is indispensable, when the experiment is made on adult corpses, but on the corpses of children, four or five hundred grammes are enough.

In order that the solution may be kept in by the large intestine for some minutes, it is necessary to make use of a rather long clyster-pipe and to get it pretty deeply thrust in so as to pour the liquid into the very cavity of the rectum, and thus not rouse too quickly the sensibility of the anal sphincter.

The pressure of an "Eguis's syringe" is sufficient to push on the liquid up to the cœcum, provided that it is quickly done, for the instrument being made of metal may cause a change in the nitrate salt if delay occurs.

An ordinary India-rubber enema syringe may also be employed, but sometimes its jerky ejaculation provokes inconvenient muscular contraction of the large intestine which often prevents the retention of liquids.

The best apparatus is an ordinary glass funnel, the slender portion of which is adapted to a rubber-pipe about two and a half yards long. A forceps squeezing the pipe allows the funnel to be filled. An assistant then lifts the funnel up in order to give the liquid a sufficient pressure, while the patient himself holds the clyster-pipe in a suitable position.

An enamelled iron receptacle fixed to the wall or to a partition is even better than the above described apparatus, for the patient is able to operate on himself without any assistance.

The silver nitrate solution, after staying for a few minutes in the colon, will be evacuated sometimes in one effort, sometimes in two, the second evacuation being separated from the first by a few hours' interval.

The only ordinary immediate consequence of the washing is a sensation of stricture at the lower part of the rectum. But this sensation, after a quarter of an hour at most, passes away.

Sometimes, but rarely, except in some very impressionable patients, the washing is followed by cramps of the stomach.

These cramps seem to be nothing but muscular contractions in the coats of the transverse colon. They are besides of short duration and are mastered by simply staying in bed.

This is the reason why I always advise patients to apply their washings in the morning, as soon as they awake. So, if they feel any cramps, they can find again at once the useful and pleasant warmth of the bed they have just left, and after an hour's rest they will do well for the rest of the day.

Out of seventy washings which I underwent, I have only three times felt the above-mentioned cramps. At any rate, this slight inconvenience did not prevent a young boy of fourteen, and a young girl of eighteen years, from bearing the treatment up to the end (Cases III and V).

Often, from the first washing, the amelioration is complete. One can, at any rate, rely on the third or fourth washing.

The patient suffers no more, sleeps well, and goes to the stool once or twice a day. The painful flatulence and twisting gripes ceasing are signs of recovery.

These signs are more perfect, when, at the fifth or the tenth washing, I allow the patients to lay aside all precautions regarding diet, and he who, for several months,

has suffered from hunger will certainly understand that I consider this point as one of the greatest advantages of the treatment I am now recommending. The patient is already stronger and more alert, and is henceforth living like any one else. He must not however be left to himself. Four times I have myself noticed the insufficiency of a too short series of washings. However great may be the antiseptic power of nitrate of silver, it does not cure in a few days an affection so inveterate as chronic dysentery.

Whether it is because the microbian agglomerations infiltrate the deep coats of the intestine, and are thus sheltered from the first attacks of the antiseptic salt, or because the antiseptic itself, coagulating the albuminoid substances on the surface of the ulcerations, shelters the deeply hidden microbes, or on account of the persistence of the spores, or simply because the ulcerations, even when freed from the microbes which keep them in bad order, cannot be cicatrised in three days and thus remain quite ready for a new sowing from the ordinary inhabitants of the large intestine, be that as it may, recurrent dysentery requires continuous attention. The treatment must be pursued for a sufficiently long time, so that the newest spores may have enough time for hatching, or the last ulceration, time for becoming cicatrised.

I have, by a groping process, been enabled to verify on my own intestine how very insufficient are too shortened series of washings.

Since then, therefore, I have always recommended to continue till the sixtieth washing, and it has, on every occasion, been enough.

Two of my patients, owing to removal, have been obliged to cease at the fiftieth washing, however in fifteen and eighteen months they have not had a relapse.

But in this case, it is always better to apply more than enough, and when definite recovery is the certain result, what trouble is it for an already cured patient, who has recovered his appetite, plumpness and strength, to persevere for a few days more in the precautions which he is already accustomed to?

Sixty washings have always been enough even for dysentery of four or five years' standing. I do not, however, reject the possibility of seeing the disease return, even after this period had expired, and in such a condition, I would see no inconvenience in doubling the duration of the treatment. I am, moreover, sure that the patient will raise no objection to my prescription.

The first trial, even when not attended with success, will have given him faith in the washings, his general state of health will have been so much altered for the better, his well-being so far different from his best moments of the time past, that he will be the first to have recourse to the treatment which has already relieved him.

I went through the same state of mind before finding this remedy, which I did not much rely on. And, I must confess, that I had arrived at the point of considering my affection as a permanent infirmity and the prospect of definitely undergoing a daily or bi-weekly washing, as a very desirable result, since, by doing so, I was able to enjoy all the advantages of health.

It is chiefly with this idea that I undertook the long series, which has been interrupted only by my departure to India.

My full recovery, since my departure from Marseilles, has been an unexpected result, and remains the inciting example I always offer to dysenterics who, more or less, are disheartened, and sceptical regarding new modes of treatment.

He who has followed my example has never been deceived. And it is guided by the hope of being profitable to a large number of suffering people that I have made this attempt to inform colonial medical men of the results I have obtained in so tenseous an affection as recurrent dysentery, by a method of treatment which in my hands has shewn itself as easily borne as it is quickly effective.

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A CURIOUS CASE OF HUMAN SACRIFICE, ITS MEDICO-LEGAL BEARINGS AS TO IDENTIFICATION AND MUMMIFICATION.

By ED. LEEDEK CHALKER, M.D., C.M., L.F.P.S. GLAS.

Assistant Surgeon, Berhampore.

THE scene of this tragic spectacle of human sacrifice was a temple sacred to the goddess *Kaluva* or *Kali*, in a village 7 miles from Berhampore (the capital of the Ganjam District). The shrine is under a tamarind tree and consists of four stone figures. Five men named BALAJI MAHARANA, BALLA JENNI, alias BALAJI PATRO, BHARTHO SRTTI, TARINI and BENNU BISSOYI, of whom BALAJI MAHARANA, a carpenter by trade, was the *guru* or teacher, used to visit the temple of this goddess on Tuesdays and Saturdays for performing worship. They also practised sorcery. About a month before the day of the murder, at one of their usual meetings beneath the tamarind tree, they had arranged that a human sacrifice should be made to the goddess—this being considered necessary to improve their knowledge of the black-art. The victim was not then decided upon. Subsequently the *guru*, BALAJI MAHARANA, who was the chief of this band, resolved that TARINI, one of themselves, should be sacrificed without his knowledge, and prevailed upon the remaining three to consent to the bloody deed.

How this fatal deed was done had better be described in the words of an eye witness and participator, BALLA JENNI and the others were tried and convicted by the Sessions Judge of Ganjam, and the conviction of BALLA JENNI was confirmed by the High Court. In his examination before the Committing Magistrate he prostrated himself and made the following statement:—

A knife is about to fall on my throat. I shall tell you truly what I have seen. A carpenter, BALAJI MAHARANA, one BENNU BISSOYI, a washerman named BHORTIYA, myself and IRRILI TARINI had been contemplating for the last month about making a human sacrifice to the goddess. We five persons used to go together. BALAJI MAHARANA suggested that he would sacrifice somebody before the goddess. He then spoke to me thus:—"We cannot get other people. TARINI is a constant companion with us. We and TARINI have confidence in each other. Therefore, you had better bring him with you." We sat at the front of TARINI's house. I and TARINI sat there. We then went, taking with us a bottle of liquor, a fire brand and this bundle of peacock's feathers. On the way we saw BALLA BAYARI and DUALABRO MOLIKO.

They went away in that direction. We sat near the goddess for a *ghari* (a little while). After we sat there for a *ghari*, these three people came. The carpenter worshipped the goddess and made the following offerings, viz., a cake made of parched rice and jaggery, flowers of the mandara tree, a new earthen pot, and a casket. After that the carpenter prostrated himself before the goddess, after that BENNU BISSOYI prostrated himself, after that the washerman BHORTIYA prostrated himself, after that I prostrated myself and after that TARINI prostrated himself. We then drank the liquor that we had taken in the bottle. We again prostrated ourselves before the goddess. TARINI drank the greater part of the liquor. Our *guru* (teacher) is the carpenter. Much liquor was given to him. TARINI prostrated himself. He could not get up for want of his senses. The washerman had a knife in his hand. He gave him a cut. BENNU BISSOYI was standing by and caught hold of the hair. The carpenter was standing in the other direction. He caught hold of the legs. The head was not completely severed from the trunk, but was only slightly attached to it. The washerman made another cut to remove the head completely. After that the carpenter cut the lower lip. He also cut the tongue with a small knife. After cutting, he sprinkled a little blood on the mandara flowers and again worshipped the goddess. He then recited prayers bit by bit. After prayers he made worship again and then presented perfumes. He then offered raw rice and fresh grass. He placed the tongue, the nails and the hair of the deceased near the new earthen pot. He then tied them all into a bundle. BENNU BISSOYI and the washerman pulled away the trunk. He (carpenter) took the head to the original goddess *Kaluva* by the western direction. He is our *guru*, and he called us. We accompanied him with a fire brand from outside the village. He had in his hands 7 mandara flowers. He cut up 7 pieces of flesh and performed worship. We then came away, taking the head with us. There were ear-rings on the head, both *woli* (lower ear-rings) and *guna* (upper ear-rings). BALAJI MAHARANA took up my *gamanchu* cloth and tied them up. He told me to preserve it for four or five days. After that I brought it and kept it with me in the *odagoni* (store-room). He wrapped the head with something and threw it in the tank, called Benabondho, on Sunday night. I was made to take an oath before the goddess by the carpenter, and I was made to promise not to reveal the matter. The carpenter said: "TARINI is your constant companion. It will be suspected that you only killed TARINI. You will be caught hold of. Even if your throat is to be cut, you should not admit guilt." I did not go to touch the dead body, because I was afraid. I said to him: "He is our sincere friend. How can we kill him?" Thereupon the carpenter, who is our *guru*, rebuked me saying ".....! Why do you say anything about it? I then became afraid and kept quiet. I went away to some distance out of fear and sat there.

Q.—You mentioned five names—carpenter BALAJI MAHARANA, BENNU BISSOYI, BHORTIYA SRTTI, and yourself and TARINI. What were you five people at the habit of doing?

A.—On Saturdays and Tuesdays we used to go together to the goddess.

Q.—Did BALAJI MAHARAYA suggest sacrifice to all of you or to you alone?

A.—He made the suggestion when we were all sitting together. The suggestion was to sacrifice somebody.

Q.—When did he make the suggestion?

A.—A month ago, he made the suggestion. He said that our learning would increase if we made the sacrifice.

Q.—Did all five people consent to it?

A.—I did not consent. TARINI also did not consent; we both did not consent. The other three consented to make sacrifice.

Q.—Whom did you think of sacrificing?

A.—That matter was not decided. All kept quiet and went away. On Saturday the carpenter said to me: "You and TARINI both go in advance." He said that TARINI was to be sacrificed.

Q.—When did the carpenter tell you?

A.—He told me this on Saturday in the hottest part of the day.

Q.—What did you say to it?

A.—I said, "He is my friend. I am not at all willing. He is my confidential friend. He is a very thick friend of mine. I cannot consent to it." The carpenter then said "all right, you do not consent." He then said that we should go in advance and that the others would follow. We went in advance and they then came afterwards.

Q.—When you and TARINI went together, were you aware that TARINI would be sacrificed that night?

A.—I was aware.

Q.—You were not willing about it. How did you take him there?

A.—The carpenter is my guru. He rebuked me. He threatened me. He abused me. I therefore took TARINI with me.

Q.—When they came there, what had they with them?

A.—The washerman brought a knife. The carpenter had a vessel with water. He had also brought a new earthen pot, some mandara flowers, and a casket.

Q.—What became of the knife with which you were in the habit of sacrificing animals?

A.—I was in the habit of using a small knife, but never a big knife.

Q.—What did you do after the sacrifice was over?

A.—We all bathed in the tank of the Battini people and washed our clothes. Each went to his house.

Q.—What did you do with the head in the day time on Sunday?

A.—The carpenter kept it in his backyard, concealing it under an earthen pot.

Q.—Who threw it in the tank on Sunday?

A.—He himself threw it there.

Such is the account of the sacrifice, as given by one of the participants. The day after the sacrifice there was an uproar in the village on account of the missing man TARINI, and 30 yards away from the temple the police found a headless corpse identified by his brother as that of the deceased, by the tattoo marks on the forearm. His cloth likewise was found near the temple. On a further search being made, the head, without the lower jaw, was found in a tank close by which was almost dry at the time.

The headless body and a skull, a bundle of human hair and some horny matter along with the cloth were sent to the District Surgeon at Bahampore for post-mortem examination.

The post-mortem appearances bearing on this case were the following:—

The trunk throughout presented a black, shrivelled, leathery aspect, like a mummified body. It was intact, except at the following positions, where the soft tissues were cut into most probably with a sharp edged instrument. The edges of the wounds were somewhat regular in outline. The wounds were found in the following places:—

(a). The neck, where the head was decapitated from the trunk; the four upper cervical vertebrae were found missing, and assumed to have been attached to the head.

(b). Right side of the chest exposing three or four ribs which were not fractured or damaged in any way.

(c). Both popliteal spaces, wounds being in size 6 by 3 inches, all structures cut through, exposing the joint.

(d). A large wound in the entire perineum, exposing the anterior surface of the sacrum. The genitals were not touched.

(e). Minor injuries to the palm of left hand. The characters of all these wounds were more or less regular in outline. The edges dry, shrivelled and black. The soft tissues of the chest and abdomen were perfectly intact. All the internal organs of the body were completely removed thoroughly and skilfully. Rigor mortis was decidedly present in the upper and lower extremities.

There was no fracture anywhere. The hair of the head sent for examination was a cubit long, black, in locks and curls and matted together with clotted blood. The blood-stained cloth and the matted locks also were satisfactorily identified by the brother of the deceased. The head produced was nothing else but a skull presenting the appearance of having been buried for about six months. It was white and glistening. There was not a vestige of soft tissue on any part of it, no trace whatever of brain substance or membranes. The tongue, eyes and gums were entirely absent, and the cervical vertebrae were wanting. Such were the appearances noted on the post-mortem examination. Considering the peculiar condition of the body simulating mummification and the entire absence of the internal organs, no opinion could be given as to the cause of death.

Now I shall consider the points of interest and importance in this case.

The Identification of the Body.

(I). The body was identified by the brother of TARINI the deceased, by some tattoo marks on the fore-arm. The hair of TARINI was similar to the bits found in the pool of blood in front of the goddess Kalava, the cut portions having been carried along with the knife and lodged in the cuts made in the ground.

(II). In the second place it was very fortunate that rigor mortis was still present, as otherwise it would have been impossible to tell how long previously death had taken place. The presence of rigor mortis helped to fix the time when death probably had occurred.

The mummified appearances of the body.

The desiccated condition and black color of the corpse, which retained its natural form and was in every way preserved from further decomposition, would have given one the idea on mere superficial examination, that death had occurred some months back, and had it not been

for the rigor mortis present at the time, there would have been considerable doubt as to the period the deceased was dead.

The Egyptians, who made a special study of embalming their dead, took about 70 days for that process. The procedure they adopted was this. The corpse was kept at home till decomposition commenced. Then a deep incision was made on the left side beneath the ribs with a rude knife or Ethiopian sword. The entrails and the lungs were extracted, and the brain was removed from its cavity by a crooked instrument passed through the nose. All this having been effected, the body was ready for the salts and spices necessary for its preservation. The ingredients for this purpose, consisting of peculiar drugs, were passed through the nose into the cavity of the skull, and the belly was rinsed with palm wine and filled with resins, cassia and other substances. The incision was then stitched up. The mummy was then steeped in natron and wrapped up in linen cemented with gum. By this process the body assumed a desiccated and rusty brown color and it was then considered preserved from further changes of decomposition.

But in the case of the corpse under notice, what is it that produced almost the same appearances in such a short time as nearly 48 hours. What gave the preservative character to the body? Possibly, the chief causes at work were these :—

(1). The body being drained of the greater portion of the fluid through the large arteries and veins of the neck and popliteal spaces.

(2). The removal of all the internal organs, and

(3). The alternate cold by night and heat by day acting on the body causing a drying of the tissues and prevention of soft decomposition, which would have been the result had the body not been deprived of its blood. The disembowelment must have been made through the rent in the perineum and through the neck; and indeed it had been so nicely effected as to lead one to surmise that it must have been the work of a man accustomed to similar business. It was afterwards ascertained that one of the murderers was a butcher by calling.

It is more difficult to account for the appearance of the skull produced, if really it was that of the man killed two days previously. It is easier to believe that it was exhumed from some grave and brought on the stage simply because a skull was thought necessary to complete the case.

Apart from the above considerations, this case also suggests the idea that there is some connection in the Hindu mind between sorcery and Kali worship. As the District Judge said in his judgment, "the reference to the removal of the thumb, the tongue, the hair and nails from the person, will suggest to any one acquainted with the subject, a strong confirmation of the fact that the murder was indeed a human sacrifice of a kind, at one time no doubt not uncommon, but which is regarded now as a curious relic of antiquity."

Miss Freany K. B. Cama, M.D., has been appointed House Surgeon, Pestonjee Homajee Cama Hospital for Women and Children, Bombay.

Surgeon-Major E. Ferrand, I. M. S., has passed the examination for the coveted diploma of F.R.C.S., Eng.

A MIRROR OF PRACTICE.

PINEAPPLE AND PAPAYA FRUIT AS ANTI-TOXINS AND SOLVENTS IN DIPHTHERIA AND DIPHTHERITIC SORE-THROAT; ILLUSTRATED BY FOUR CASES.

By E. W. CHAMBERS, L.M.S. Cal., L.S.A. Lond.
Coroner of Calcutta.

Case I.—A lady of a religious sisterhood, in a large educational institution under my medical care, was suddenly taken ill with fever and a bad sore-throat. In 24 hours diphtheria of a severe type showed itself. The tonsils, fauces and throat were covered with the characteristic false membrane, and the symptoms generally pointed to a rapid fatal termination. Tracheotomy was contemplated but abandoned, as the case seemed hopeless. I resolved to try the effect of papaya fruit. A half ripe papaya was got and cut into small pieces. The patient was directed to eat a piece every hour, and some of the expressed juice of the fruit was applied to the fauces, tonsils and throat with a cotton swab, every three hours.

In a few hours the urgent dyspnoea and acute febrile symptoms subsided. Next day the membranous deposit was distinctly less, and within another 24 hours the membrane had disappeared and the throat was clean, though raw and inflamed-looking still. The subsequent convalescence was uncomplicated.

Case II.—A native attendant of Case I got diphtheria in a bad form, and was treated exactly as her mistress was, and made as easy and good a recovery from the use of papaya.

Case III.—Another religious sister became ill and was very bad with diphtheria. In her case, in addition to the papaya applied to the throat and eaten, I prescribed pineapple in small pieces every hour, alternately with papaya. This combination seemed more favorable by its more rapid and salutary action than papaya alone. A cure was effected in four days, while relief and evidence of recovery began within a few hours of commencing the treatment.

Case IV.—A Eurasian lad, suffering with diphtheria in a severe form, was given pineapple only. The membranous deposits disappeared in two days, but a quinsy remained, and as he was unable to get proper nursing at home, he was removed to the Presidency General Hospital and recovered in a few days without any return of the diphtheritic deposit.

Remarks.—The following is the method I advise for the use of papaya and pineapple in cases of diphtheria. Get a few raw or green papayas; express the juice and with it freely cauterise the fauces and throat every hour or half-hour, or oftener, as the symptoms may demand. Also peel and slice the papaya salt it and let the patient keep chewing this and swallowing the juice, but carefully throwing out the chewed pap. Also get a pineapple; crush out the juice, and let the patient sip this all day, or else cut it into slices and let him masticate it and swallow the juice. In a few hours the diphtheritic growth will be destroyed; but the chewing of the papaya should be continued for a day or two, and the pineapple should also be taken for five or

six days. *Diet*: Nourishing soups, with light wines. The patient ought to drink nothing hot or warm, and be kept in a comfortable room with good ventilation, away from draughts.

The use of these fruits in this dread malady is nothing new, nor ought I to be credited with the discovery of their great therapeutic value in diphtheria. Some years ago, a friend who had lived for many years in Natal, told me that the Kaffirs or natives of Southern Africa, use the pineapple freely and generally for the cure of diphtheria, and their success has robbed this scourge of its terrors, for very few of them who use this remedy ever die from the disease. I have used papaya for diphtheria and diphtheritic sorethroat for some years with invariable success. So far as papaya goes, its solvent properties are well known. It causes rapid disintegration of meat and other nitrogenous substances with which it is brought into contact. Its value as a solvent of fleshy growths, malignant or benign, was first mentioned to me by a *hakim*, and I have used it with some measure of success in lupus, epithelioma, warts and in diphtheritic deposits.

The brief notes now given are of recent cases, and I am led to report them as I think the more extended trial of papaya and pineapple would lead to the most remarkable recoveries from diphtheria. My impression with regard to the chemical and physiological action of the active principles found in these fruits, is that they are possessed of potent germinicidal (antitoxin) and solvent properties, and I feel confident that the general use of this method will result in minimising much suffering and in saving many lives.

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A CASE OF INFLAMMATION OF THE CEREBRAL MENINGES ENDING IN RECOVERY.

By SURGN.-CAPT. GEO. S. THOMSON, M.B., C.M., I. M. S.
Decca.

THE patient was a Marathi sepoy, aged 34, with 14 years and three months' service. Admitted into hospital, 18th March 1894 for ague, with a temperature of 101°F. morning and 103.8°F. evening, also cough and expectoration of frothy mucous. He is very restless, skin hot and dry, much thirst and dryness of the throat complained of.

Urine high-colored, tongue furred, pulse weak, 120, no physical signs of pneumonia. He had not had any previous illness. Ordered antifebrin and antipyrin if temperature be 102°F. or over, and mist diaphoretic with grs. 5 of quinine thrice: half ounce of rum with egg and milk every fourth hour. Report next morning:—Slept very little last night; much cough and some expectoration. Bronchitis present, both sides, large tubes affected, restless and disturbed; weak and prostrate, temperature 101.2°F. evening 104.8°F. tongue dry, pulse 120.

Antifebrin and antipyrin given (ana grs. 5) Slept badly, and at times was very restless and violently delirious, shouting out in a piercing shriek which could be heard at intervals a long distance. This cry was repeated about every 4 minutes, and the hands raised to the forehead at the same time. The shriek was

most distinctive and unmistakable in character, a real cephalic cry. Bowels moved once in 24 hours.

Next morning temperature 98.6°F. Pulse 76. Respiration 20. Prostrate and weak. After 10 A.M. he ceased to speak intelligently, wandered in his talk, rambling and muttering delirium. Temperature 99°F. Pulse 80. Passed water voluntarily, but motions involuntarily in the bed. Picking at the bed-clothes, shouting and talking incoherently; kept in bed by two attendants with difficulty. Blisters applied to back of neck and repeated in the evening. Calomel grs 6, croton oil 2 minims. at once Ice to suck and cold evaporating lotion to head. Twelve hours later very noisy and delirious: picking at bed-clothes, sinking down in the bed, and tossing arms about aimlessly. Applied wet pack, cold to head and nape of neck. Bromide of potassium and ammonium at once, and iodide of potassium in the evening. Ungt. hydrargyri rubbed freely into both sides of neck, and repeated in 12 hours. The rubbing in of this ointment to the soft parts lasted half an hour each time.

Next morning temperature normal; still delirious, and, tossing about, much firm contraction of the extensor muscles of the left forearm, and tremor in the muscles of the right leg, grinding of teeth, paralysis of the left side of face, and twitching of the muscles generally is distinctly noticeable. The abdomen is rather distended, and *notache cerebral* found developed on repeated trials. Pupils much contracted, insensitive to light, and skin dry. Some cough and frothy expectoration. Respiration noisy, the nostrils dilate forcibly during expiration. Bowels moved and urine passed naturally and voluntarily, evening temperature normal, pulse 86, respiration 24.

Conscious next morning, sat up and took some food during the day. Talks rationally, but complains of the blisters on the neck, which prevent him from moving his head about. Kept all day in a dark room in a separate ward and remained quite rational. On the eighth morning of the disease, and the fourth day since the cerebral symptoms developed, the report reads:—Slept well, bowels moved naturally; he went to the latrine himself without assistance. Took food with his own hands and is quite rational. No pain in head. Pupils normal. Temperature normal. Pulse 80. Respiration 20. Convalescent. No paralysis. Moved into general ward with one attendant to look after him.

On the twelfth day after his admission he was discharged as he was quite well enough to go on furlough. He has since returned and is doing all his duties as a sepoy, and to day he walked 12 miles by route march with his regiment, having perfectly recovered from his serious illness.

Syphilis and Aphasia.

DR. JOLLY reported at the Congress of German Physicians, Vienna, a case of cerebral syphilis in which he was able to demonstrate by autopsy the dependency of word deafness and aphasia on a complete destruction of the entire parietal lobe, the two first temporal lobes, the angular gyrus, pre-cuneus and cuneus. The patient was unable to read his own name, to write from dictation. The deafness JOLLY considers was due to the lesion in the temporal lobe, and the loss of speech possible to the entire destruction of the auditory centre and areas.

**VENTRAL HERNIA, RUPTURE BY VIOLENT
COUGHING, PROTRACTED PROTRUSION
AND STRANGULATION OF GUT:
OPERATION: RECOVERY.**

By JAMES R. WALLACE, M.D.

Calcutta.

THE following notes of a case of Ventral Hernia, in which spontaneous rupture of the abdominal wall with protrusion of bowel for two days had taken place, will, I hope, prove interesting. It occurred while I was Resident Surgeon to the Calcutta Medical College Hospital. Reduction of the gut was effected and a radical operation performed under antiseptic precautions.

The case which I exhibited to the Calcutta Medical Society was peculiarly interesting and so rare, that I need not apologise for going into a few details of its history and treatment. Our subject is a middle-aged, sparely built Mahomedan male, by trade a fruiterer, and has seldom been "sick or sorry" in his life. He has enjoyed such good health indeed, that he tells me the most serious illness he has had, has been a *toothache*. About six months ago however his troubles began, and he was admitted into the Medical College Hospital with a fairly large sized abdomino-parietal abscess, extending from a point an inch below the umbilicus in the middle line, to an inch and a half from the left anterior superior iliac spine. This was opened at its most dependent point, i.e., near the iliac spine, and about ten ounces of pus let out; the abscess cavity readily contracted and the incision was healed within a fortnight, when he was discharged from hospital. There was no hernial protrusion at this time. A month later however he found a small soft, compressible swelling had formed just at the site of the incision, about the size of a walnut, and simultaneously another of equal dimensions made its appearance about an inch below the umbilicus. These tumours enlarged perceptibly, when at the end of five months the upper one which had increased in size more rapidly than the other, was about as big as a large orange. The patient states that they caused him no pain; that in the recumbent posture the swellings disappeared, leaving only the wrinkled skin to be seen outside. On the night of the 1st October (11 P.M.) he says that he had a violent fit of coughing during which he felt a sudden twinge of pain at the upper swelling and perceived at the same time a small knuckle of gut shewing itself through the tear. He was about a mile from home when this accident occurred, and he walked the whole of this distance to reach it, and then found on his arrival that a much larger portion of the intestine was extruded. He tried several times to push back the protrusion but to no effect, till, disappointed with his own efforts, he sought admission to the Medical College Hospital after travelling from his house a distance of nearly fifty miles by palanquin and partly on foot. He was admitted at 12 P.M., on the 3rd October, i.e., forty-nine hours after the rupture of the hernial sac and the extrusion of the gut. I saw him at this hour and found him much exhausted; his expression was one of extreme anxiety, his breathing shallow and hurried; the extremities cold and his skin bathed in clammy perspiration. On inspection I found a large coil of the small intestine (ileum) pushed out of the abdominal cavity uncovered by peritoneum, but coated with a thick layer of recent lymph, which adhered to the external coat of the gut and partially agglutinated the apposing adjacent surfaces of the coils. One or two ecchymosed patches and a general turgescence of the outer coat of the exposed intestine were plainly visible.

I resolved to wash the gut and to return it into the peritoneal cavity, and accordingly under thorough antiseptic precautions I bathed it with a weak solution of carbolic acid, and endeavored gently by taxis to reduce the hernia, but fruitlessly; for the gut was constricted and partially strangulated at the inner opening of the hernial

sac, and I found it necessary to pass a bistoury guarded by my left index finger into the sac to free the obstruction, and did so by making an incision upwards in the median line about a quarter of an inch. This was amply sufficient, for on a little further manipulation the gut passed inwards very easily. I now entered my finger into the sac, and even explored with it the peritoneal wall adjoining the seat of constriction to be assured there were no adhesions between the gut lower down and the parietes. I found no such complication and proceeded then to close the spontaneous opening in the abdominal wall by passing a continuous catgut suture along the edges of the tear, which was fully an inch in length. Having gone so far, I surmised how it would be best to obliterate the sac of the hernia, the skin covering which lay in loose folds and represented a cavity which was large enough to hold a big sized orange. I thought I would best attain adhesion between the walls of the sac and thereby radically prevent the recurrence of hernia, by passing a line of stitches along the neck of the sac. I did so by means of an uninterrupted catgut suture and then dressed the wound lightly with carbolised gauze, supplemented by a pad of the same material and an abdominal bandage with a large, heavy linseed poultice to cover the whole.

Subsequent progress.—The degree of exhaustion in which the patient was admitted, was more marked after the operation, and for a few hours the patient seemed partially collapsed. He rallied however under the influence of diffusible stimulants and local heat. For the first three days the patient had slight pain over the umbilical region; he had a little tympanitis on the third day after the operation, but both this and the pain subsided with the evacuation of the bowels which took place on this date quite naturally. The wound healed kindly and each day saw the sac shrivelling up more and more; only a little pus was found to ooze out from the external opening on the 4th and 5th day after the operation. A small abscess, totally unconnected with the sac, formed about 2 inches from the wound; this healed after incision. The patient progressed very steadily, he gained strength, had the regular use of his bowels, and really suffered from no active constitutional disturbance from the first day after the operation. To-day—the 9th November—on examining the parts two distinct hernial protrusions are seen, both situated as originally described, but the upper (the one operated on) is half the size of its fellow, though it was originally more than three times bigger than it. The sac of this tumour is found to have contracted very much the cicatrix at its summit, marking the seat of the spontaneous aperture, is firm and thick, the inner opening or rather the neck of the hernial sac is however as much open as before, and presents a tough fibrous circumference, which certainly does not seem to have been benefited by the operation. The temporary closure of the neck of the hernial sac must however have been beneficial, since it prevented the egress of the gut which would have been an obstacle to contraction of the sac. The patient owes much to his subsequent care and treatment under Dr. MULLEN, and I have no doubt that rigid attention to antiseptics and the soothing influence of the poultices which were continuously applied over the dressings for several days helped to ward off peritonitic complications.

He is now fit to return to his home, but will escape, it is hoped, the recurrence of similar misfortune to his hernia, by the protection afforded by a truss with which he is being provided from the Hospital funds.

Remarks.—This case appears to me to present two interesting features: (1) it shows that in some rare cases, from attenuation of the hernial coverings, spontaneous rupture can and may take place from any sudden or violent physical strain, and (2) it demonstrates the possibility of recovery of the gut after protracted exposure to the external air.

THE Indian Medical Record.

16th January, 1895.

THE FIRST ANNUAL GENERAL MEETING OF THE INDIAN MEDICAL ASSOCIATION.

THE First Annual General Meeting of the INDIAN MEDICAL ASSOCIATION was held at 4.30 P.M. on Saturday, the 29th December 1894, at the Office and Library of the Association, 150 Dharantala Street, Calcutta, in accordance with Rule 27 of the Registered Rules and Regulations of the Association, and in obedience to the Resolution of the Council passed at its second meeting on the 5th December 1894, at which it was decided to ask Surgeon-Lieutenant Colonel EDWARD LAWRIE to preside, and to install the Officers and Council into their various offices by the formal vote of the Association in General Meeting assembled.

The following members were present, viz., H. H. SIR BHADVAT SINGHI, M.B., M.R.C.P., DR. LAL MADHAB MUKERJI, DR. E. W. CHAMBERS, DR. H. W. JONES, DR. K. G. SIRCAR, Surgeon-Captain H. C. HODGKINS, A. S., DR. S. O. MOSES, Surgeon-Major J. FORSYTH, S. A. S., MRS. DR. MANSELL, DR. MANMATHA NATH CHATTERJEE, DR. GUNGA GOVINDA SARKAR, DR. HURRY NATH BISWAS, DR. BEPIN BEHARI GHOSH, DR. AHMED MIRZA, DR. R. G. S. CHEW, Assistant Surgeons J. L. RAWLING SMITH, D. S. OLLENBACH, J. FRASER, G. S. O'NEAL, J. ROWLEY, D. WALLER, H. GIDNEY, R. T. RODGERS, DR. JAMES R. WALLACE and four other members who did not leave their cards, also Surgeon Lieutenant Colonel EDWARD LAWRIE by the special invitation of the Council.

The notice calling the First General Annual Meeting being read, the President, DR. LAL MADHAB MUKERJI, Rai Bahadur, rose and said:—"Your Highness, DR. LAWRIE, MRS. MANSELL and gentlemen,—At this the First Annual General Meeting of the Association, I have to express my great pleasure at seeing so fair a gathering of our members. Our membership is a large one, and this meeting represents only a very small fraction of our Association, and necessarily so, as our members are scattered far and wide over India and Burma, while those who reside in this metropolis have had their energies so much tried and their time so much occupied, that it has been a laborious task for many of us to attend this meeting. The INDIAN MEDICAL CONGRESS has absorbed our time and taxed our strength during the past four days; and this fact, coupled with the necessarily short notice of the assembling of this meeting,—due I may add to our waiting for the arrival from Hyderabad of our respected Chairman—has deprived us of the presence of many of our Calcutta brethren and other visiting members who are in town for the Congress. To all of us who are present and to our brethren all over this Empire, our gathering here this evening must and will be a source of pleasure and congratulation. It represents our society to the world at large as a duly corporate and active body. It places us, on the threshold of the great work that lies before us and confronts us with the responsible duties and aims for which our Association was first conceived.

May it be our lot to perform these duties and fulfil these aims and bear these responsibilities to the best of our ability. I will not trespass further on your attention, as we shall hear more of the Association and its work from our worthy Secretary. There now remains for me to fulfil the very pleasant duty of proposing that the Chairman of our First General Annual Meeting, who has honored us with his presence and given us this tangible evidence of his good-will and sympathy with the local profession—feelings that I may proudly and gratefully acknowledge—are shared by a very large section of the higher officials of the Indian Medical Service. An expression of this good-will and sympathy towards the local profession was publicly made by the President of the Congress, and I am sure we gladly accept these tokens of friendship from DR. HARVEY as a guarantee that the official leaders of our profession will aid our Association in furthering all its legitimate projects for the advancement of the local profession.

"It needs few words of mine to introduce DR. EDWARD LAWRIE, the gentleman whom I beg to propose to be our Chairman for this evening. He is a distinguished member of the Indian Medical Service, and a man whose name as a Surgeon and as the great and enthusiastic exponent of the principles of SYME for CHLOROFORM ADMINISTRATION, is known not only in India, but all over the world, wherever scientific medicine has a single disciple. To DR. LAWRIE as the initiator and to His Highness the NIZAM of HYDERABAD as the warm supporter of the famous Hyderabad Chloroform Commission, the medical profession and suffering humanity owe a large debt of thankfulness. The Hyderabad Commission thoroughly vindicated SYME's principles—principles I may say that have been more than vindicated by the practical experience of every surgeon in India for many years past. To many of us DR. LAWRIE is personally known, and in this large metropolis, the field of his earliest labors, his name is still a household word. We appreciate his presence with us this evening very deeply and gratefully, and I now beg to propose that DR. LAWRIE do take the chair."

This was seconded by DR. BEPIN BEHARI GHOSH, and carried unanimously with acclamation. The Chairman now called on the Secretary to read his report.

DR. WALLACE said he could not do better than present to the meeting the report of the Association that was read at the first meeting of their Provisional Council. This report proved that the first conception of the movement that had developed into the present Association, dated so far back as 1884, when the Independent Medical Practitioners' Association was set on foot. That Society did not live long, and the movement to establish an Association on a firm, permanent and extended basis was revived with the inauguration of the *Indian Medical Record* on the 1st January 1890. When sufficient general interest in the movement was aroused, the proposals for a draft prospectus for the formation of the Indian Medical Association, based on the lines of the British Medical Association, were circulated in 1892. After much consideration and correspondence with various centres throughout the country, a draft prospectus was printed in the office of the *Indian Daily News* on the 15th March 1893,

and circulated for the acceptance of the profession throughout India and Burma. It is important to bear this fact in mind to prove the priority of the origin of the INDIAN MEDICAL ASSOCIATION over any other similar movement in Bengal. The fact that this prospectus was duly promulgated on the 15th March 1893, that the original documents are in existence, and that the truth of these assertions is proved by the records of a large public printing office and by the evidence of the Committee that performed all the initiatory work of the Association, all serve to establish the claim that this Association has a priority of existence over any other movement of its kind in Bengal; while considering the catholicity of its prospectus, embracing as it does the length and breadth of the Indian Empire, and admitting into its fold, as it does, every section of our profession recognised as "qualified," I may say without fear of contradiction that it is the first movement of its kind ever started in India. Agitation of a truly constitutional type has led to our present results and we hope by a similar line of well-conducted agitation to unite the whole profession of India into one harmonious corporate body. The Secretary reported on the rapid growth of the INDIAN MEDICAL ASSOCIATION, the widespread interest it exercised, and the sound basis on which it was established, as it now numbered nearly 600 members. They were a duly registered and lawful corporate body, and after the formal installation of their Provisional Council as a permanent Council, possessed of due power to perform their duties and functions in accordance with the registered MEMORANDUM, RULES AND REGULATIONS OF THE INDIAN MEDICAL ASSOCIATION—a duty which the members would perform by their united vote this day—they would now, as their worthy President had remarked, be brought face to face with the great and responsible duties and aims which the Association was called upon to fulfil."

The Chairman, Surgeon Lieut.-Colonel EDWARD LAWRIE, now said:—

"Your Highness and Gentlemen,—I regard it as a great honor to have been invited to preside at this meeting of the INDIAN MEDICAL ASSOCIATION, and I cannot tell you the pleasure it has given me, after an absence of fifteen years, to return to Calcutta and find such striking evidence of the growth and prosperity of the medical profession during that time. This Association will doubtless become powerful for good, and I have accepted your invitation to preside at your inaugural meeting, because I have full confidence that the Association will be managed in such a way that nothing but good will come of it. There is no doubt that an Association, such as this, can represent the wants of the local profession much better than individuals can do it. I observe in the report which has just been read that the word "agitation" is employed. If I may offer a word of advice, I should recommend the Association not to stop at mere agitation, or to expect to gain anything by it alone. Representation of just wants, carefully thought out, may and undoubtedly will be of great benefit to all the members of the profession in every part of India, but I should think that the worrying of Government, however persistent, will result in no good.

* Gentlemen, India cannot do without the Indian Medical Service. It is open to all British born subjects of the

Queen-Empress, but I am told that there is a feeling among a large class of the medical community that the service is not practically open to everybody who is entitled to become a candidate for it, because the London examining boards reject many men who go up from India on what may be called "sham physical grounds." If this is true, the Association is justified in calling attention to it, but I should not feel inclined to view the rejection of even a large number of candidates on physical grounds, as necessarily in any way an evasion of anybody's rights. I knew two gentlemen who have been in India for many years, and who are both noted athletes, who were rejected for the Indian Civil Service by the London Board on the ground that they were the subjects of some defect which unfitted them for employment in a tropical climate. Again a very curious thing happened to myself. When I appeared before the Medical Board for admission into the Indian Medical Service, I had never seen a recruiting card, which is a card used to test the eyesight, having on it a number of dots arranged in various kinds of groups. When this was shewn to me, I thought the dots were letters, and after a prolonged effort to make them out I finally said: "Three Es. on the top line, and four Bs. on the second line." The examiner did not allow me to proceed further, but rejected me on account of defective vision. Directly I discovered that there were only dots on the card, I satisfied him that my vision was in no way defective. I can give you no advice as to the advisability of trying to enter the Indian Medical Service. My own opinion is that there is heaps of room in India, without reference to the I. M. S., though I am in no way advising you not to go in for it. I say there is plenty of room for lucrative practice all over India for as many men as like to take their degrees and acquire a thorough knowledge of their profession. I assert this in the face of the fact that Calcutta appears to be swarming with first class doctors. Here for example is our worthy friend, the Editor of the *Indian Medical Record*, the strong and independent medical journal which voices the needs of practitioners throughout India. DR. WALLACE is also Secretary of your Association, and this to me is sufficient proof of the esteem in which you hold him. There are dozens of other prosperous practitioners I might name, and yet I see that excellent men find it worth their while to come out from England on purpose to settle in practice in Calcutta, and they unquestionably do well. I take this fact to signify that there is ample room in our profession here and in all other towns in India, for fifty times the number of men there are at work at present.

I have had a great deal of experience of medical schools in different parts of India, and have seen something of nearly all of them, and I have no hesitation in saying that the subordinate services in this country have a bright future before them. In Hyderabad we cannot turn out the men of this class fast enough, and we are often asked to pass them out of the school months before the examinations are due. A few months after they have been in their appointments they generally return to visit their old haunts, and even in that short period, judging by their robust and rotund figures and by their gold-headed walking sticks, they shew marks of prosperity, which invariably remove all misgivings from my mind with regard to their future.

"I have already detained you too long, but before I conclude, I must proffer my warmest congratulations to the Association on having secured Rai Bahadur LAL MADHUB MOOKERJEE as its President. I am confident that no one who heard the Rai Bahadur's eloquent address on "The progress of Ophthalmology in Bengal" at the Congress the other day will ever forget it. The Vice-Presidents and Members of Council are all men of mark, and well-known far beyond the limits of the Calcutta profession, and if anything can ensure the success of the Association, the selection of officers of this stamp ought to do it. I heartily wish the Indian Medical Association a long, a prosperous, and a permanent career."

The Chairman now called upon DR. AHMED to propose:—"That the present Officers and Council of the Association be accepted as permanent." This was seconded by MRS. MANNELL, M.D., and carried unanimously.

A vote of thanks to the Chairman, was proposed by Assistant Surgeon JOHN ROWLEY, seconded by DR. MANMATHA NATH CHATTERJI, and carried with acclamation.

At the close of the meeting, DR. S. O. MOSES suggested that the Chairman be asked to intervene in bringing about an amalgamation of the Indian Medical Association with another movement, of a somewhat similar nature, urging that such an amalgamation would tend to shew a more united front and help to do good.

DR. WALLACE, the Secretary, said he cordially seconded DR. MOSES' proposal and agreed with his sentiments. He was no opponent to amalgamation. He had reviewed the position of the INDIAN MEDICAL ASSOCIATION in his Report before the Council, which would be embodied in his earlier remarks when the Report of this meeting was published. He wished it clearly understood, that, speaking for himself, he would welcome union and would gladly do his part towards accomplishing it on any reasonable basis.

DR. LAWRIE replied that he would be glad to do what he could when he was put into full possession of the facts of the case, as up to the present he knew of no other movement but that of the INDIAN MEDICAL ASSOCIATION. All the members now repaired to the Secretary's quarters for refreshments, after which the meeting dispersed.

FEVERS AND THEIR TREATMENT.

FROM the earliest ages "FEVER" has been a subject of special interest and concern to the followers of Esculapius, and this is naturally to be expected when we consider the very many and varied departures from health with which a rise of body temperature is associated. Hence it may safely be predicted that it will continue to receive the marked attention of medical men in all ages and of all nations, as on the correct estimation of its nature and indications, wherever it is found to exist, must necessarily depend the successful handling of all those diseased conditions with which it is associated.

The paper on "Pyrexia and its treatment" contributed by DR. HALE WHITE before the section of medicine of the last Annual Meeting of the British Medical Association and in the discussion that followed, as reported by the Journal of the Association, many points of vital import as to the cause and treatment of fevers and as to what a rise of

body temperature may portend or indicate were touched upon. Indeed on these matters our knowledge is still so limited and unsettled, that as DR. JAMES LINDSAY remarked at the discussion, we are still without any accepted theory of fever; and while it is generally admitted that hyperpyrexia is dangerous, it is still a matter of opinion whether a small rise of temperature is to be regarded as a friend or an enemy.

Although in the "Nervous theory of Fever" is perhaps to be found the most comprehensive explanation of the pyrexial condition, yet this is not universally applicable. The neurotic theory of fever has led DR. HALE WHITE to classify pyrexia under three heads: (1) that due to disease from damage of the central nervous system—the cortex, corpus striatum, crus, pons and spinal cord; (2) reflex pyrexia due to strong peripheral stimuli; and (3) pyrexia produced by the circulation, through the thermic apparatus, of substances absorbed into the blood.

DR. JAMES BARR drew attention to the fact that oxidation was the chief source of body heat. The heightened temperature then may be due to active oxidation of products resulting from metabolic changes caused by the fever poison; and as the oxidation of such morbid products is desirable, a heightened temperature cannot always be regarded as deleterious. Much to the same effect are the remarks of DR. R. DOUGLAS POWELL, who said that pyrexia must be considered from the microbic side also. Microbes required for their cultivation a lower temperature than that caused by the poisonous products resulting from their introduction in the system; consequently the fever induced by the microbes diminished their further productive activity. The importance of these considerations in the treatment of fevers is of course easily understood, and the remarks of physicians of such wide and extensive experience, as those who took part in the discussion on the rational management of a fever and on the dangers of some, as also on the value of therapeutical agents, are worth considering, especially as they deal with those remedial agents which have lately been much exercising the minds of our profession.

There is more or less an unanimity of opinion as to the danger always to be apprehended from hyperpyrexia, and as to the necessity for dealing promptly with this condition; for, as DR. HALE WHITE remarks, heat kills protoplasm and coagulates albumen; and by far the majority of those present at the discussion were agreed that in combating with this condition, nothing is of greater value than the application of external cold. Indeed it is particularly striking from an analysis of the remarks made at the meeting that the use of cold and the very cautious use of antipyretics is now sounded as almost the key-note in the rational and successful treatment of excessive or moderate fever. In the latter, the routine use of antipyretics is condemned, and in the former nothing has been found to give more prompt and effectual relief than the application of cold to the surface. The mode of applying cold, varies with different practitioners and with varying circumstances—the age of the patient, the disease, the climate, &c.

DR. HALE WHITE finds that in children, cold sponging may suffice to reduce an unusually high temperature; but, as a rule, a cold bath must be employed. For an adult, if the temperature be over 106°, the temperature of

the bath should be between 70 and 75°, and for children a little higher. The further directions are: lift the patient into the bath in a sheet, stir the water and when the rectal temperature falls to 100° or 101° (this is usually obtained in ten minutes) put the patient back to bed and cover him with a sheet. If collapse results, give strong brandy and water, and apply hot water bottles. A bath may be improvised, in the absence of anything better, by placing the patient on a Mackintosh sheet, raising the parts around him by means of pillows, raising the head end of the bedstead, and then pouring the cold water in at the raised end of the Mackintosh and letting the water run out at the lower end into some receptacle.

Dr. JAMES BARR was of opinion that as air and water are capable of absorbing much heat from the body, and of removing heat by convection, a properly made warm linseed poultice applied, so as to allow of free evaporation from its surface, tends to cool rapidly, to quickly absorb heat from the body, and to transfer that heat to the atmosphere, thus reducing body temperature. He was, however, quite satisfied with the results attending the treatment of severe cases of prolonged high temperature by constant immersions in water at a temperature of 90° to 98°. Drs. OSLER, R. SHINGLETON SMITH and E. MARKHAM SKERRITT were also strongly of opinion that the prompt and vigorous adoption of hydrotherapeutic measures is the best way of combating with a hyperpyrexial condition.

As to the *action* of these applications of cold to the surface in fevers, it was pointed out by several that not only do they lower the temperature, but delirium, tremor, prostration, and liability to complications were diminished by their use, so that they possibly aid in the excretion of toxins, as proved by the experiments of ROQUE and WEIL that in cases of typhoid fever treated by cold baths the elimination of toxic products was enormously helped and increased. Dr. JAMES BARR was of opinion that the beneficial results of cold applications may be due to their rousing up the nervous system to better regulate heat-production; while Dr. A. J. BENTLEY of Cairo remarked, that as the wet pack and the application of ice to the abdomen in the treatment of cholera relieved restlessness and set up reaction, cold may act as an antidote to the cholera bacillus.

With regard to *ordinary pyrexia*, Dr. WHITE maintained that as it has not been proved that this condition is in itself harmful—and in fact by some *e.g.* CANTANI is regarded as beneficial at times—it is unwise to treat it as a symptom, as our treatment may do more harm than the disease. In ordinary pyrexia we should therefore not be too anxious to reduce the temperature for the following reasons: (1) Some of the specific micro-organisms manufacture two substances, one pyrogenous and the other causing fatal symptoms. By treating the pyrexia the second is still left active, although the patient may appear better. The reduction of pyrexia then may give a false sense of security; (2) antipyretics do great harm in the early stages of febrile diseases by abolishing an important aid to diagnosis; and (3) lowering the temperature may impair the immunity which an attack of a specific fever often confers; as the obtaining of immunity, such as that afforded from small-pox by vaccination, often entails pyrexia. The pyrexia should then not

be treated unless there be reason to believe that it is diminishing the activity of the heart or nervous system. In the pyrexia of typhoid if the temperature be over 102.5, cold sponging, the cold pack, or the cooled tepid bath may be used with benefit. He thought the cold bath undesirable, as the shock is too great. Dr. BARR and Sir THOMAS GRANGER STEWART also were in favor of cold compresses and wet packs in moderate pyrexial conditions, while Drs. OSLER and FRANK POPP advocated the employment of the cold bath in typhoid. It was thought that the pyrexia of phthisis is best left alone, and that the use of antipyretics in its relief was quite useless and unsatisfactory.

With regard to *drugs* Dr. SNOW remarked that calomel, the sheet anchor of a former generation in all cases of fever, is not without its virtues, partly by purifying the *primæ viæ*, and partly by being converted into mercuric perchloride which is hostile to microbes. Dr. F. ROBERTS drew attention to the necessity for using simple remedies, such as the old saline mixture, Dr. W. KEMP of New Zealand considered aconite very useful in fevers, especially in children. Dr. TYSON advised the use of aperients, and that the diarrhoea sometimes accompanying pyrexia be not checked. The value of quinine as an antitoxin in some pyrexial conditions was referred to. Dr. E. SKERRITT used it in thirty or forty-grain doses in adults, this quantity being given as one dose or in two with an interval of half an hour; and as its effects are very slowly developed, it does not cause collapse, and its influence extends over a longer period than that of any other antipyretic. Dr. DOUGLAS POWELL occasionally combined quinine with the salicin class of remedies; while Dr. A. BENTLEY found a mixture of quinine and sulphate of magnesia most useful in bilious remittent fever. Mrs. ELIZABETH ANDERSON, M.D., found that anaemia may be accompanied by pyrexia which is rapidly relieved by iron and rest in bed.

We have reserved for the last the expressions of opinion on the class of antipyretics so very commonly; and we fear very injudiciously and deleteriously, made use of now-a-days—antifebrin, antipyrin, phenacetin, &c. From all the foregoing, it must be conceded that their administration in ordinary cases of pyrexia is to be condemned. Dr. WHITE says that these agents are losing favor with the profession, as they produce cardiac depression and cyanosis, and ROGUE and WEIL believe that they do not help the extraction of poisons. Dr. LINDSAY has found no permanent benefit from their use in a typhoid case, while Dr. SKERRITT had long given up the use of antipyrin in this disease, as it has been known to produce the most dangerous depression.

Dr. TYSON is of opinion that aperients in many pyrexias are a more rational treatment than the now common use of phenacetin, &c. Dr. KEMP did not find antipyretics of much use in enteric fever, and Dr. MAHOMED looks upon antipyrin as a dangerous drug. The only opinions in favor of the drugs in question were the following:—Dr. SHINGLETON SMITH had never seen any harm from the efficient but not excessive use of phenacetin. Dr. STEWART trusted to cold sponging, &c., and the continuous use of antipyretics. Dr. R. HEATH was able to mention but one case with a temperature of 106.2° in which forty-grains of antipyrin given in ten-grain doses every four hours was used with

the best result, and Dr. BARTLEY thought that in influenza the most successful mode of treatment was by antipyrin combined with salicylate of sodium, ten grains of each, every four hours. This brings the temperature to normal in twenty-four hours.

In reference to the treatment of fevers, history appears to be repeating itself; and the profession inclines to go back to the simpler remedies of former years, and to regard with disfavor or to adopt with diffidence the mass of synthetical remedies which, while they do honor to the science of chemistry, are making our extra pharmacopoeia a ponderous volume of drugs of very questionable utility.

OUR RECORD FOR 1894.

ANOTHER year of existence, another year of success, of progress, and of fresh achievements. Such is our record for the year that has just closed; and we may be pardoned if we evince a certain amount of jubilation over such a result. We feel it our duty to offer to our numerous and generous contributors our hearty thanks for the kind help they have accorded us, and by which we have been able to make the *Record* increasingly appreciated. Our helpers have been many, and we would hope that the services in India will, by their continued and augmented literary aid, shew that they fully realise how much can be hoped for and effected by supporting a journalistic organ. Among the various developments and healthy signs of our generation is to be reckoned the increasing demand for medical literature, which demand has in recent years, brought into existence in this country an increase of medical journals. The various ways in which journalism can benefit the profession are too well known and acknowledged, and the enumeration is certainly unnecessary. Admissions and acknowledgments can however avail naught; but determined and well sustained co-operation is indispensably necessary for our progress and advancement. We have before this distinctly declared, and we hope have proved, that we labor in the interests of the profession in this country in particular; that is, while we are concerned pleasurably in everything that will make our profession better and nobler in every way all the wide world over, we have an especial interest in whatever favors our cause in this country. The medical worth and intelligence of India may be regarded as a hidden light—a light shrouded and shaded by a thick screen of western jealousy and cynicism—and the sure and practical way of breaking through the obstruction is for the men of the country to give to the world the worthy literary contributions which we are assured they are fully capable of giving, and also by powerful and determined union and association. In both these respects we have had much cause for gratification in the year 1894. Our appeal, made somewhat in the same terms as at the close of 1893, to the members of the local profession to shew what they are worth, what they have done, and can do, has been met with a response fully evidenced in our columns; and the fact of the INDIAN MEDICAL ASSOCIATION having become a *fait accompli*, gives a strong guarantee of better days for our local professional brethren. The establishment of this association, is an item of special gratification among our labors of the past year, for we feel sure that it will mark an era in the

history of the profession in India. In the past number that have joined it, and in the readiness with which so many have sought enrolment, we have evidence not only of such an association being a crying want, but that our local brethren have learnt the value of UNITY. The closing months of the year 1894 saw the association a legally constituted and registered body, and the 29th of December last, marks the first Annual General Meeting of the Association. It was held under the presidency of Surgeon Lieutenant-Colonel LAWRIE, than whom there is probably to be found no one who is a stauncher friend or readier helper of the local profession.

Yet another achievement which by the help and support of our readers and contributors we have been able to effect, is the enlargement of our Journal from the 1st of January last; and this, of course, means more literary help to us, more interest in clinical work, by willing contributors, and more medical reading and information to subscribers. We regard as the most important event, not only of the Indian *Annus Medicus* 1894, but in the life history of the profession in India, the meeting of the Indian Medical Congress. Nothing can be more portentous of good. Although we had occasion to remark that this gathering, the first of its kind in this country, was unfortunately characterised by no small amount of invidious party feeling, we feel sure that time will destroy all sectarian prejudices, and that these gatherings will result in a *approachment* of the different services and branches of the profession in India.

There has been no change of note in the Commissioned services of the country. With the Army Scheme being put in regular working however, and with the unification of the Commissioned Medical Services, there are sure to arise conditions and circumstances prejudicial to individual interests, not the least perhaps of which will be that special appointments in the different commands and presidencies will be very uncertain expectations indeed. The Warrant Medical Services have been placed in part possession of what should in all reasonableness be accorded them by the grant of the designation of Assistant Surgeon; and relying on the promises of a great and honorable Government, we may hope that ere long a more substantial consideration will be given them by their pay and pension being raised. We are sorry to note that there are a few who think that this class of public servants are not underpaid; but the Government of India, it is highly satisfactory to reflect, holds to an opposite opinion. The wars and expeditions of the past quarter of a century have made the lives of military medical subordinates literally a very struggling existence. Their lot in the field, and that of the poor Military Hospital Assistants also, is one of the hardest, if not positively the worst, of those engaged on active service. The very inadequate establishments of the subordinate military medical services, and their consequent over-work, both in garrison and field employ, has seriously shattered the health and constitution of many of them, and have certainly taken a good number of years out of their natural brief term of life. It may well be asked by them whether life is worth living in the department for the small remuneration given in a service which generally ends in impaired constitutions and curtailed existence.

The grievances of the Civil Medical Services—of Assistant Surgeons and Hospital Assistants—have been well and prominently ventilated in our columns, and there is every reason to believe that they will soon receive the mode of consideration which has long and persistently been withheld. We do not blame the Government in this matter. They have for years past been kept blind to the merits and usefulness of these civil medical officers. Within the past few years, however, the grievances of the Civil Medical Services have been acknowledged, and we hope that this year of grace, upon which we have just entered, will be marked by a re-construction of the Civil Medical Services of the country and in an appropriate recompense to our friends the Civil Assistant Surgeons and Hospital Assistants, both in the remuneration and status of their long neglected services.

We would again wish each and every one of our contributors and readers a very HAPPY NEW YEAR.

COMMENTS AND NEWS.

DR. LAWRIE ON HAFFKINE'S CHOLERA INOCULATION.

It will be interesting at the present time when so much attention is being publicly called to the subject of cholera, to reproduce Surgeon-Colonel EDWARD LAWRIE'S criticism of HAFFKINE'S system of Cholera Inoculation, delivered before the Indian Medical Congress. Dr. LAWRIE said:—

"MR. PRESIDENT AND GENTLEMEN,—We must all welcome any proposal or measure which has for its object the prevention of cholera, and admire anybody who, like M. HAFFKINE, endeavours to stamp out the disease in the energetic way he has done. But we must not allow our admiration of M. HAFFKINE to obscure our vision or consideration of actual facts, and I venture to bring to your notice a few facts with regard to his inoculations for cholera, for the purpose, let me assure you, of furthering our progress in the direction in which M. HAFFKINE is working.

"M. HAFFKINE has stated a well-known fact, animals cannot contract cholera. The question then is,—What condition is produced in animals by inoculation with the attenuated decoctions or cultivations of the comma bacillus? It must be some form of septicæmia, not necessarily infective; and you must keep in mind that almost all forms of septicæmia may be in their nature either very mild and harmless or very severe and uncontrollable. We know that in septic poisoning in man or in animals, diarrhoea is often a prominent symptom, and is also a common cause of a fatal termination of the disease. The vexed point that has to be determined is whether septic poisoning in any form is ever curative or preventive of other diseases. Three examples occur to me in which it has been proved to exert a curative action. It was long ago discovered that in indurated ulcer of the leg accidental attacks of erysipelas caused the thickening to disappear, and the ulcer healed up; and this led to blistering in ulcers of this kind as a safe and effective imitation of the unsafe erysipelas. The second example was brought to my notice only this morning by Surgeon Lieutenant Colonel J. O'BRIEN. A patient under his care for compound fracture of the leg of several weeks standing got general dermatitis, and when the dermatitis subsided, the wound was found to be so much improved that it forthwith commenced to heal and speedily got well. The same kind of effect was observed in the KOOK cure for tuberculosis. The local effect was in certain cases beneficial, but the constitutional effect could not always be kept within safe limits, in fact the case showed itself to be dangerous.

In the same manner we now have HAFFKINE'S inoculations brought forward as a cure or preventive for cholera. These inoculations produce a period of illness, generally slight and harmless as compared with that produced by KOOK'S tuberculin but, like that, a form of blood poisoning. The question next arises,—Is septicæmia in any form whatsoever a preventive of cholera, and if so, to what extent? If mild attacks of blood-poisoning or septicæmia can be proved to protect entirely or to any appreciable extent against cholera, there will be some ground for claiming protection to the same extent by HAFFKINE'S inoculations or vaccinations. But nothing of the kind has been proved as yet: in fact the evidence so far is all the other way. It appears to me that cholera is much too complicated and serious a condition to be accounted for by a cause so simple and easy to deal with as the comma bacillus. Moreover, bacteriologists themselves are not agreed as to the identity of the microbe, and cholera cases are certainly met with everywhere in which the comma is not even a concomitant of the disease. Lastly, in order to make out the semblance of a logical case for the comma bacillus, M. HAFFKINE is bound to shew that it is present in the organism prior to the commencement of the symptoms of the disease it is said to cause. There is little doubt cholera may be driven away by a pure water supply. What it is in dirty or infected water which gives rise to cholera is a point of the last importance, and I for one am content to leave it to bacteriologists to discover."

HONORS TO INDIAN MEDICAL OFFICERS.

It is remarkable, and most conspicuously so, that year after year goes by and the HONORS LIST of the *Government of India Gazette*, while it contains the name of many a happy and deserving officer of the Civil and Military services, medical officers are left without the reward of decoration for their work and worth. It was expected that the unusual and important occasion of the Medical Congress would have been marked by some recognition of the medical profession by the Government in some special manner, and it was hoped that some of the leaders of the profession intimately connected with the medical administration of the country would have been decorated in the recent Honors List. The heads of the Survey, Public Works, Revenue, Legal and other departments of the State in India, hold the distinguished honor of knighthood, and rightly so. Their burdens and responsibilities are great, and their position is worthy of the respect and honor that are paid to them. While admitting these facts, the claims of the medical profession, great as they are to the highest and best consideration of the State, are conspicuously neglected. We expected to see Surgeon Major-General W. R. RICE made a Knight of the Star of India of which he holds a Companionship, and how fittingly would the honor of a Companionship have fallen upon the worthy President of the Indian Medical Congress—an officer whose public services command the kindest appreciation of the Government. Then we have Surgeon-Colonel HOOVER, who succeeds Sir JOSEPH FAYRE, without even a C. I. B., and many other splendid officers of our profession, some retired and others in active service, whose merit and faithful work have long since earned some tangible mark of public esteem, all doomed to disappointment. It is not yet too late to consider the case of the DOCTORS, Generals, Judges, Engineers, Lawyers, Politicians, Financiers, Philanthropists, have all obtained a place for their representatives on the New Year's Honors List. Will the Government not correct its many sins of omission and bestow its gracious tokens of appreciation on the medical profession? LORD ELGIN eulogised the State medical services in a very estimable manner in his recent public utterances, and may we not hope that His Excellency will support his words by acts, the doing of which, will honor the Government of India as much as it will the Medical Services.

OCCUPATION AND EYESIGHT.

We abstract from the *Lancet*:—MR. SIMEON SNELL, Ophthalmic Surgeon to the General Infirmary, Sheffield, read a paper at a recent meeting of the British Medical Association on the relations of some occupations to eyesight. His conclusions are that the *biacids* of carbon used in the vulcanisation of India-rubber causes amblyopia. Di-nitrobenzol, used in the manufacture of explosives, induces amblyopia or dulness of vision, chiefly in those engaged in mixing or grinding the material. GALEZOWSKI is of opinion that the inhalation of nicotine powder by those engaged in the manufacture of tobacco causes visual disturbances in the persons so employed; but MR. SNELL's enquiries make him concur in the opinions of MESSRS. SHEARS, C. LEE and of DR. DOWLING, all of whose observations have been extensive in this direction, that visual troubles do not affect persons engaged in tobacco factories. MR. SNELL's observations do not, moreover, bear out the opinions of MR. PRIESTLEY SMITH and VALUDE, that lead-form manufacturers suffer from dulness of vision. File-cutters suffer from saturnine amblyopia. The statement made by some observers that glass-blowers often suffer from cataract is not confirmed or supported by MR. SNELL, who finds, however, that a man can look with more or less ease at a metal in a furnace up to a temperature of 2000°F; hence in cast-iron furnaces as the heat of the metal is from 1800° to 2000° the men take no precautions; but persons working at molten steel (temperature being from 2700° to 2800°) have to wear dark blue glasses to protect their eyes. In none of these has MR. SNELL been able to detect any deep or superficial eye lesion as a result of the light and heat. The light employed in electric welding—about 8000 candles power—causes sharp conjunctivitis with great pain and lacrymation; and if it be allowed to enter the eye, optic neuritis with retinitis may occur.

CHOLERA MORBUS. A REQUIEM OVER THE LUCKNOW EPIDEMIC.

SAYS *Lloyds' Weekly*:—A soldier (PTE. J. CONROY, First Battalion East Lancashire Regiment, asks us to find space for the following lines, and the pathetic nature of the story which they reveal commands immediate attention as it concerns the 98 men of his regiment who lost their lives in the cholera epidemic of July and August 1894 at Lucknow and Ekraill:—

Why, lads, you look grave and dejected; the smiles have all gone from your face,
Something dreadful I'm sure must have happened. Come tell me what has taken place?
And where are the lads I remember that once formed a jovial throng?
I miss their familiar faces; I'm sure something must have gone wrong.
The story's a sad one to tell, sir—God help me, I scarcely can speak,
As I think of their places left vacant, my heart it feels ready to break.
One morning we woke from our slumbers, to hear news that with horror did fill:
The cholera had broke out amongst us. Two comrades were carried off ill.
We knew then that death hovered round us; we waited in silence and dread,
When some one came in then they told us; poor Kenny and Johnson were dead!
It was then we were ordered to camp, sir, on the Brigade square that's not far away;
It is used by the garrison at large, sir; and there we were forced now to stay,
I assure you it was not so lively, with mousoons it just looked a swamp;
The poor men very soon were complaining of sickness, diarrhoea and cramp.
The doctors—like heroes they worked, sir, their efforts seemed of no avail,

It was then the poor *Thirlwall* was ordered to move camp to a place called *Kokrah*.
Surgeons Thompson, McDowell and Pilcher, with Surgeon Withers—by all they are blest,
But it was not in men's power to save them, and soon they were laid low at rest.
The scenes on the camp were heart-rending, though to cheer our men we all tried,
We all did our best to attend them, but they weakened and sickened and died.
It was then that we found there were heroes, for deny it I'm sure no one can,
For no assistant surgeons worked harder than O'Donoghue, McCarthy, and Mann.
By no means forgetting the others, whose names you have all heard, no doubt:
Mr. Holmes, Mr. Atwell, and Murphy were continually moving about;
The Reverend Father Petronius—God bless him—he always was there,
Like an angel of mercy from heaven, his presence was every where.
Now brave lads of humbler station in life's battle, "Before you I'll bring;
Their goodness cannot be forgotten; their praises all true men should sing.
When the news that their comrades were dying these lads in their tents chanced to hear;
Although on their beds they were lying, to nurse them they soon volunteer.
Such bravery will not be forgotten—their praises they ring far and near,
I am happy to find that such brave lads, belonged to the East Lancashire.
There was Kelly, West, Lundy, and Conroy, Brotherton, Dunn, Glenn, and Maclear.
With Atkinson, Warring, and Lovvatt, and Patterson, likewise was there;
There was Partington, Harris, and Wilson, Craig, Ogilvie, Walker, and Knowle,
But the first night of brave Walker's duty, the angels bore off his poor soul;
The night of the third day of August would have filled any heart with a fright,
For to hear the loud peals of the thunder quickly followed by flashes of light;
And the rain that was falling in torrents rushed in under every man's bed,
While the lamps dimly burning above us showed the faces of dying and dead.
We could see the still forms of our comrades borne away in the thunder and rain,
For thirteen brave lads fell asleep on that night, who never will waken again.
It was sad to stand by their beds there, and know that no power on earth
Could grant them their last dying wish, sir; one glance of the land of their birth.
And to hear their weak voices keep calling, for a father, a mother, or wife,
While some from their God were imploring, to forgive them their sins of past life.
When the news is heard in Old England, it will cause many a heart grief and pain.
As they think of the bright, happy faces that in this world they won't see again.
And the heart broken parents at home there, God help them to bear this sad blow
As they think of their sons that are lying on the far distant plains of Lucknow.

BENGAL CHEMICAL EXAMINERS.

It is very gratifying to record the public satisfaction that is generally felt all over Bengal, and in Calcutta particularly, at the excellent and most efficient way in which the present work of chemical analysis and medico-legal examinations is being carried out by the Chemical Examiners' Department of the Bengal Government, in which Surgeon Captain J. F. EVANS, M.B., I. M. S., Professor of Chemistry and DR. CHUNEE LAL BÖSE, F. C. S., are the officers concerned.

SPECTACLE SELLERS AND THEIR COMMISSIONS TO DOCTORS.

It has been brought to our notice that a firm of spectacle sellers in Calcutta, thrives on a monopoly of prescription orders for glasses, which are given under the distinct understanding that a commission of 30 per cent. be paid to the prescribers by the said firm, while other firms equally well equipped, are denied the patronage of the public, because they refuse to stoop to a system of granting commission which they declare is tantamount to robbing their customers. We would draw the attention of the prescribers to the recent ruling of the General Medical Council of Great Britain, and we would warn the firm that this practice must cease, as no matter how tempting the bait, the system is a fraud on the public, as it entails the payment of higher prices by patients, who are compelled to buy their glasses from the firm the prescription is sent to, and of necessity the so-called *opticians* must make good their own profits by adding the commission to the prescriber, to the sale price of the spectacles and this entails a payment of about 50 per cent. more than the honest selling price of the glasses. We would specially ask the prescribers to discontinue and discountenance any further transactions of this sordid nature, which sinks the medical profession to the level of a very questionable trade.

THE DOCTOR AS A MAN AND A COMPANION.

THE following passage from MR. JAMES PAYN'S "Gleanings of Memory," now appearing in the *Coruhill Magazine*, will be interesting to members of the medical profession. He says:—"Upon the whole, and for 'a scratch' companion, I prefer a doctor to a man of any other calling. He may not be very good as a conversationalist, but he is rarely very bad, like a cheroot. He has a genuine experience of life, and has seen down to the depths of it; a sick man does not attempt to deceive his doctor, or put the best face on his character, as he does with a priest. Moreover, what is very unusual, your doctor knows more about you, professionally at all events, than you know about yourself. He does not tell you about it, it is true; not a word of that aneurism you carry about with you, and which will some day kill you in half a minute, but your consciousness that he may possess such knowledge makes him interesting. The best suggestions I have had made to me for plots for my novels have come to me from doctors, to whom I have also had cause to be grateful for many things."

BRASS FOUNDERS' DISEASES.

BRASS founding is said to cause various forms of disease, viz., gout, chronic nephritis, progressive paralysis of legs, tremor, muscular wasting, and locomotor ataxy. A group of symptoms spoken of as brass founders' ague has also been noticed. "The fit of ague is ushered in by languor and depression, then prostration with pallor, cold sweats, and chills, that even may amount to rigors, with chattering of the teeth, precordial anxiety, headache, nausea and muscular pains. The onset of vomiting arrests the symptoms and usually is followed by sleep, from which the patient arouses almost well" (ARLIDGE). We learn from the *British Medical Journal* that the Home Secretary intends therefore to schedule brass casting and mixing as unhealthy industries; and proposes rules aiming at cleanliness of person and workshop, ventilation, provision of respirators while actually casting, and the prohibition of eating where casting and mixing are carried on.

BLACK-MATING AN INDIAN PHYSICIAN.

THE case in which the Raja of Nattore was charged with extorting a promissory note from DR. GANGA GOBINDA SARKARA, who had been in his employ, has ended in the conviction of the Raja, and his being sentenced to six months' rigorous imprisonment with a fine of Rs. 25,000, Rs. 6,000 of which, if realised, is to be paid to the complainant as com-

pensation. MR. L. PALIT, the officiating Sessions Judge of Boalia, who tried the case, said that he was unable to accept the opinion of the two European assessors who were in favor of acquittal. An appeal has been admitted by the High Court of Calcutta, we are sure our brethren will heartily sympathise with DR. SARKARA in his troubles, for unquestionably the prosecution of this case has entailed on him much anxiety and expense. He has now to face the burden of an appeal, in which we sincerely hope he will prove successful. We would be glad to see a fund raised for aiding DR. SARKARA in his troubles. Our Manager would gladly forward all subscriptions received and they would be duly acknowledged in the *Record*.

INDIAN MEDICAL ASSOCIATION ITEMS.

THE second meeting of the Council of the Indian Medical Association was held at the office of the Association at 6 P.M., on the 15th December 1894. Present: DR. LAL MADHAB MUKERJEE, President (in the chair), DR. J. G. ANDERSON, K. G. SIRCAR, H. W. JONES, M. L. DUTT, H. C. HODGKINS and J. R. WALLACE. Items of business:—(1) The notice calling the meeting was read, (2) the minutes of the last meeting were read and confirmed, (3) date of starting *old* Association corrected from 1886 to 1884 (first pamphlet of old association placed on table and filed); (4) date of First Annual General Meeting fixed for Saturday, 29th December 1894 at 4-30 P.M.; (5) meeting to be held at the office of the Association, (6) Secretary to prepare programme for meeting and to make all needful arrangements for the same, (7) resolution to make present Council and Officers "permanent," to be put to meeting, (8) that Surgeon Lieutenant Colonel EDWARD LAWRIE of Hyderabad be asked to take the chair at the First Annual General Meeting, (9) that after receiving DR. LAWRIE'S consent, notices for the meeting be issued on post-cards.

The Annual Meeting took place and a brief note of the same appeared in the last number of the *Record*, a full report of the same appears in this number.

A Sub-Committee consisting of DRS. MUKERJEE, SIRCAR, HODGKINS and WALLACE met on Friday the 11th January, to consider the subject of the grievances of Civil Assistant Surgeons and Hospital Assistants. It was decided, after a discussion of the matter, that the President and the Secretary do forthwith prepare a report on the subject for the Council, in view of the early submission of a representation to Government.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

WE have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:—

John E. Panlthy, L.E.C.P., Lond., L.R.C.S. Edin., Resident Surgeon, Chaudhry Hospital, Calcutta.

J. Dolby, Asst. Surgeon, I. M. S., Civil Surgeon, Bhamo, Up. Burma.

P. H. Rodrigues, Asst. Surgeon, I. M. S., Medical Officer, Hill Fort, Satara.

T. Maduranayagam Pillay, C.M.S., Hospital Assistant, 22nd Madras Infantry, Secunderabad.

W. A. Boucher, Asst. Surgeon, I. M. S., Station Hospital, Umballa.

Robert Brown, C.M.S., Asst. Surgeon, I. M. S., Medical Officer, E. B. & Ry., Sara Ghat.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing Volunteers.

REWARD OF THOROUGHNESS.

WHAT'ER thou dost, do well—it may not stand
An hour, it may for centuries endure,
But thou shalt have performed thy Lord's command,
And thy reward shall be for ever sure.

It may not be a palace thou dost rear,
It may be but a cottage for the poor;
No matter, 'tis the Lord's; be of good cheer,
Palace or cottage, thy reward is sure.

Here thou must learn to work: earth is God's school;
Let not thy hours in idleness be spent;
Bow thy stiff neck, thy stubborn spirit rule,
What thy Lord sets thee, do, and be content.
When He has tried and fully proved thy worth,
Found thee obedient, diligent, and true,
Then He will take thee from his school of earth,
And in His heaven-world give thee work to do.

—Oliver Wendell Holmes.

AVERAGE LIFE OF PHYSICIANS.

ONE of the most curious statistical records compiled during the nineteenth century is that by DR. SALZMANN, of Essling, Wurtemberg, regarding the average duration of life among practitioners of medicine. He found, on going over the ancient records of Wurtemberg, that in the sixteenth century the average duration of life among medical men was but 36.5 years; in the seventeenth century, 45.8; in the eighteenth, 49.8; and that at the present time they reach the favorable age of 56.7.

It appears in the compilation, that DR. SALZMANN ascribes the great increase in longevity to the disappearance of the "black pest," the introduction of vaccination, and the great diminution in the number of typhus epidemics—representing three classes of disease which formerly decimated the medical population.

SCARS AND NEURALGIAS.

HANS VON BULOW, the eminent pianist and conductor who died in Cairo in February last, had for years been a martyr to maddening headaches. In accordance with his often-expressed wish, after his death, PROFESSOR KAUFMANN, of Cairo, who performed the *post-mortem* examination, extracted the brain, and sent it to a German physician for examination. It now appears that the surface origin of two nerves leading to the scalp was imbedded in a scar, left by an attack of meningitis in early youth. Whether this scar can be held responsible for the great artist's many eccentricities must remain an open question.

CALCUTTA MEDICAL COLLEGE HONORS LIST.

THE recent Test and Honor Examinations of the Calcutta Medical College were attended with the following results:—
Hygiene:—Gold Medal, H. L. O. FLEMING (Military); 1st certificate J. E. L. CHINAL and A. E. CLARKE (both military); 2nd certificate, Syam Lal Barat. *Dentistry*:—Gold Medal, E. S. Pushong (military); 1st certificate, Satyendra Nath Sen; 2nd certificate, Satya Saran Mitra. *Medical Jurisprudence*:—Gold Medal, Susil Chandra Bhattacharya; 1st certificate, J. J. McDonald (military); 2nd certificate, Kali Mohan Sen; 3rd certificate, Miss L. Phillips.

HONORS FOR THE LOCAL SERVICES.

The title of Khan Bahadur is bestowed on Muhammad Husain, Senior Hospital Assistant, Bengal; the title of Rao Bahadur on Trichinopoly Venkataswami Niamagani Pillai, Senior Hospital Assistant, Madras Sappers and Miners and on Camaisapuram Lutchmiah Nayadu, Senior Hospital Assistant, 2nd Madras Lancers; the titles of Rai Bahadur on Dr. Kailas Chunder Bose, late President of the Calcutta Society, and Lala Radha Kishen, Assistant Surgeon in the Punjab. All very deserving men indeed.

A FRAUD AND A SLANDERER.

DR. E. F. CASTLE and MR. W. M. JONES brought an action for slander against a bone-setter farmer, whose certificates bore the above calumny as affix, because when attending to a colliery boy who was treated by the plaintiffs for a "crushed arm," he said that the boy had been improperly treated by the plaintiffs, and telling the boy that he would be a cripple for life unless the limb was broken afresh and reset, remarked: "What a lot of those men's work I have had to put right." The suit was heard at the West Riding Assizes, where the jury assessed the damages at £80 and the evidence disclosed that the mystic letters following the name of the defendant bone-setter, who had never attended College nor received any surgical training meant Registered Chemist, Member of the Pharmaceutical Conference and Veterinary Surgeon, "R. C., M. P.C., V. S."

SHORT ITEMS.

Veterinary-Captain Joshua Arthur Nunn, D.S.O., F.R.C.V.S., Army Veterinary Department, Principal, Veterinary College, Lahore, has been made a C. I. E. We congratulate Captain Nunn, and are heartily glad to see the veterinary profession thus recognised.

The new Dufferin Hospital at Amraoti, in Berar, which has just been constructed at a cost of about Rs. 30,000, has been formally opened. Miss Trewhy, from the Lady Lyall Hospital, Agra, has been selected to take charge.

It has been decided that Surgeon-Colonel Cleghorn shall succeed Surgeon-Major-General Rice, when the latter shortly vacates his appointment as Surgeon-General with the Government of India.

Surgeon-Major R. W. S. Lyons, M.D., has been appointed to act as Professor of Medicine and Clinical Medicine and Therapeutics, Grant Medical College, during the absence of Surgeon-Major R. Manser, M.D.

Professor Gairdner, of Glasgow, has been re-elected to the Presidential chair at the Edinburgh Royal College of Physicians. Professor Simpson of Edinburgh has again been appointed Vice-President.

The services of Surgeon-Captain C. Duer, M.D., F.R.C.S. I. M. S., Bengal, stationed at Dhubri, in Assam are replaced at the disposal of the Military Department.

At the examinations to be held next month in London twelve commissions in the Army Medical Staff and eighteen in the Indian Medical Service will be competed for.

Dr. K. G. Kar, L.B.C.P. & S. Edin., a practising physician, of Calcutta, has been appointed Examiner in *Materia Medica* at the next L. M. S. examinations of the Calcutta University.

Surgeon-Lieutenant Seton, who was wounded a few days ago at Kaniguran, is doing well. He was shot in the knee and fell, dislocating his thumb.

Brigade-Surgeon Lieutenant-Colonel J. C. G. Carmichael, M.D., I. M. S., P. M. O., Presidency District, proceeds home shortly on furlough.

Surgeon-Major Edward Ferrand, I. M. S., has passed the examination for the F. R. C. S. of England.

Surgeon Captain Edward Gibson, M.A.S., (retired) has been appointed Chief Sanitary Inspector of Bangalore.

Dr. M. G. Deshmukh is a candidate for the new Bombay Municipal Corporation.

There are 420,000 people in France affected with goitre.

VITAL STATISTICS.

| PROVINCES AND TOWNS. | Population. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population per annum. | NUMBER OF DEATHS FROM | | | |
|----------------------------|-------------|--------------------------|---------------|---------------|------------------------------------------|-----------------------|------------|--------|-------------------|
| | | | | | | Cholera. | Small-pox. | Fever. | Bowel Complaints. |
| BENGAL.— | | | | | | | | | |
| Urban Calcutta ... | 681,560 | { From 4th Nov. to 8th | ... | 1,490 | 33.4 | 67 | 10 | 606 | 204 |
| Suburban " ... | ... | { Dec. 1894. | ... | 1,071 | 50.9 | 21 | 0 | 474 | 200 |
| Howrah ... | 116,606 | { For November 1894. | 2,276 | 1,910 | 35.76 | 166 | 0 | 1,009 | 286 |
| Patna ... | 165,192 | | 5,246 | 7,750 | 35.52 | 246 | 0 | 6,021 | 286 |
| MADRAS.— | | | | | | | | | |
| Madras ... | 452,518 | { From 17th Nov. to 14th | 1,366 | 1,293 | 37.1 | 4 | 0 | 471 | 158 |
| Trichinopoly ... | 90,609 | { Dec. 1894. | 123 | 103 | 19.7 | 0 | 2 | 32 | 16 |
| Madras ... | 87,428 | { From 27th Oct. to 16th | 148 | 141 | 27.5 | 5 | 2 | 20 | 14 |
| | | { Nov. 1894. | | | | | | | |
| BOMBAY.— | | | | | | | | | |
| Bombay ... | 821,764 | { From 28th Nov. to 25th | 1,333 | 1,829 | 27.45 | 2 | 11 | 415 | 195 |
| | | { Dec. 1894. | | | | | | | |
| N.-W. PROVINCES.— | | | | | | | | | |
| Lucknow ... | 244,303 | { For November 1894. | ... | 1,098 | ... | 7 | 0 | 826 | 66 |
| Benares ... | 213,168 | | ... | ... | ... | ... | ... | ... | ... |
| Cawnpur ... | 163,779 | | ... | 576 | ... | 0 | 0 | 494 | 7 |
| Allahabad ... | 162,895 | | ... | 437 | ... | 0 | 0 | 369 | 2 |
| PUNJAB.— | | | | | | | | | |
| Delhi ... | 189,648 | { From 28th Oct to 24th | 691 | 687 | 47.5 | 0 | 4 | 478 | 38 |
| Mooltan ... | 64,265 | | 363 | 238 | 48.0 | 0 | 0 | 106 | 18 |
| Lahore ... | 159,597 | | 497 | 523 | 42.7 | 0 | 0 | 853 | 35 |
| Amritsar ... | 135,401 | | ... | ... | ... | ... | ... | ... | ... |
| Peshawar ... | 63,079 | | 204 | 191 | 43.5 | 0 | 4 | 136 | 3 |
| ASSAM.— | | | | | | | | | |
| Sylhet Dist. * ... | 2,154,593 | { For October 1894. | 7,355 | 5,385 | 30.00 | 22 | 66 | 2,508 | 548 |
| Goalpara " ... | 452,304 | | 1,907 | 1,498 | 39.72 | 14 | 43 | 1,211 | 33 |
| Kamrup " ... | 634,249 | | 1,717 | 1,386 | 26.28 | 74 | 3 | 988 | 50 |
| Sibsagar " ... | 457,274 | | 1,318 | 1,478 | 38.76 | 259 | 0 | 720 | 292 |
| CENTRAL PROVINCES.— | | | | | | | | | |
| Nagpur ... | 117,014 | { From 28th Oct. to 1st | 423 | 406 | ... | 0 | 0 | 252 | 15 |
| Jubbulpur ... | 78,155 | | 164 | 404 | ... | 5 | 15 | 211 | 40 |
| Saugor ... | 32,736 | | 120 | 153 | ... | 0 | 0 | 63 | 13 |
| BURMA.— | | | | | | | | | |
| Rangoon ... | 180,324 | { From 17th Nov. to 15th | ... | 677 | 39.04 | 2 | 0 | 185 | 57 |
| Moulmein ... | 55,785 | { Dec. 1894. | ... | 172 | 34.17 | 1 | 0 | 62 | 11 |

* There were 38, 4, 1 and 18 deaths from *Beri-beri*; and 1, 36, 160 and 0 deaths from *Kala-azar* in these four districts, respectively.

OUR LONDON LETTER.

(From our own Correspondent.)

A NEW battle ground (this time on bacteriological principles) is being fought over as to the method of treatment which Professor BEHRING terms "*blood serum*" therapy as applied to one disease, namely, *diphtheria*. The method of preparing anti-diphtheritic serum, which most commends itself to English medical men, is that of Dr. ROUX of the Institut Pasteur, Paris. So far a series of cases has been published in various journals throughout Germany, France, Holland, England and Italy (ROUX) amounting to about 1,400 patients treated by injections of anti-diphtheritic serum or antitoxin diphtheria, as it is termed by BEHRING, in doses from 1 c.c. (m.xv) to 30 c.c. (3viii); the average mortality of these cases being about 20 per cent. on the total number of patients infected.

The most fatal cases being those known as "*mixed infection*." Those affected with "*pure diphtheria*" alone showed a mortality of about 5 per cent., as shown by the cultivations made from the false membranes coughed up or obtained by the point of the spatula when examining the throat, and thereafter inoculated on sterilised serum in a test-tube, where the various colonies of bacteria can be detected growing, say 24 hours after the virulent bacillus of KLEBS and LOEFFLER is placed in contact with the culture medium. Serum is being manufactured rapidly in England by two or three eminent bacteriological teachers, or at any rate under their supervision. We have not yet accepted the treatment as a specific, but it bids fair to prove so in the near future, despite gloomy anticipations in a few quarters, and mutterings about the fate of KOCH's "*Tuberculin*," which latter drug has at least proved itself useful as a test or as confirmatory of a diagnosis of

tuberculosis. Very curiously too, it may be noted, that Dr. BEHRING was associated in his discoveries with Dr. KITASATO, the well-known Japanese bacteriologist, the discoverer of the bacillus of Bubonic Plague. With Dr. ROUX of Paris is associated Dr. YERSIN, who also studied and described the plague bacillus, both working simultaneously during the late plague epidemic in Hong-Kong. This fact may draw the attention of your readers and further interest them in the late investigations into seropathy, especially as Bubonic Plague has visited India on various occasions, and more remarkable still, if true, as BEHRING hints that the symptoms following the bites of venomous serpents may be found amenable to injections of "blood serum." How this will turn out remains to be seen! Many subscriptions have been collected throughout Germany, France, &c., for the establishment of laboratories, wherein the bacteriological work, such as cultivation of the diphtheria toxins, can be carried out previous to immunising horses from whom the anti-diphtheritic serum or antitoxin is to be obtained. These horses are first examined by skilled veterinarians, who have to pronounce them free from disease before they are made use of; they also test them for glanders by hypodermic injections of mallein. These precautions should satisfy even the most prejudiced minds, who are wont to talk about *omne ignotum pro nobili*, when discussing the merits or demerits of a new remedy, or any other invention which cannot be understood at half a glance. The anti-diphtheritic serum, as a remedy for diphtheria, rests on the basis, at any rate, of certain established physiological facts worked out, as to the properties and physiological functions of blood serum by such authorities as BACHNER, HUXLIN and others, forming a famous list of experimenters. The experiments of BEHRING are confirmed by those of KITASATO, and Drs. ROUX and YERSIN working together have corroborated all these facts in detail and added others to them. Dr. ROUX, in spite of his great contributions towards BEHRING's ultimate discovery of antitoxin-antidiphtheritic serum (ROUX), although with the true modesty of an earnest and devoted scientist, awards the greatest need of praise to BEHRING, when he states that BEHRING placed the crowning stone of the arch of this series of discoveries, i.e., when he utilised the serum of immunised animals in the treatment of diphtheria. A certain evening newspaper in London, with a large circulation, has published two or three letters from correspondents decrying the antitoxin treatment of any disease; the first denominating the serum a filthy remedy; the second casting semi-scientific aspersions, on the method by stating all the weak points of the method in an unscientific basis, and distorting, for the purpose of exciting popular ridicule, those points which have been left open in the scientific papers on the same subject, and in no wise admitting any of the established and confirmed and scientific medical and therapeutic facts of which we, as medical men, must be cognisant. It seems to me that these subjects should not be provided as pabulum for popular superstition and be held up as illustrating the credulity, dogmatism and charlatanism of medical men, especially when it is done to serve the anti-vaccinationist party, who do not even take up their stand on scientific grounds, but seem with a certain

wrongheadedness to try and bring scientific theories and practices down to the level of the affairs of ordinary life and to degrade the physician to a lower degree of existence than that of a workman. Several London firms are bringing out hypodermic syringes, stated to be available for blood serum injection, but the only one that conforms to my ideas of asepticism and utility is one manufactured by Burroughs, Wellcome & Co., and with the production of which at an economic rate this enterprising and scientific firm have been at great pains to render this syringe useful and reliable in injecting anti-diphtheritic serum. They have been successful, by producing a syringe capable of being rendered quite "aseptic," in boiling, and the platino-iridium needles with which this beautiful instrument is fitted, are beyond all praise. This syringe is of sufficient capacity to hold 20 cubic centimetres, i.e., seven drams and a half of fluid, and could easily be employed to inject ether in cases of chloroform narcosis or in the case of patients almost moribund, when one is called to attend them. My apology for the above remarks is, that although diphtheria is not a common disease in India, still this remedy has caused quite a stir in medical circles, since the public discussion on diphtheria, which took place at the International Hygienic Congress sitting at Buda-Pesth in the course of the current year, when the experiments of BEHRING and KITASATO were discussed "in extenso."

The treatment of tetanus traumatic or idiopathic by means of injections composed of "anti-tetanic serum," tetanus antitoxin will shortly, I hear, engage some attention from the profession generally.

Dr. MUELLER of Yackadanda, of Victoria is, I am happy to hear, again bringing his *strychnine treatment of snake-bite* before the profession all over the world through the pages of the *Indian Medical Record*. It is to be regretted that a few members of the profession should oppose a remedy such as this that promises well without at least giving it an extensive trial. For it must be remembered that many a valuable therapeutic remedy has been discovered by hard-working general practitioners. Dr. MUELLER, however, need not despair of a hearing in this matter. This remedy in the "tablet form and readily soluble in water can safely be injected," in doses of $\frac{1}{16}$ to $\frac{1}{8}$ grain has been incontestably proven, and it may be mentioned that the uses of these small "discs" renders the treatment of snake-bite more certain and safer, doing away with a necessity of weighing or measuring solutions of this powerful alkaloid, the two latter giving rise to such fallacies as poisoning or overdosing. In all cases of snake-bite with "suppression of urine" a tablet containing gr. $\frac{1}{16}$ of pilocarpine nitrate might well be tried in addition to persistence in the administration of strychnine sulphate or nitrate in gradually diminishing doses.

A Committee of the Association of Fellows (R. C. S. England) took place on 31st October 1894 with Mr. T. HOLMES, President in the chair. A meeting being arranged between the sub-committee of Fellows and "the same of Members to settle matters of collegiate interest."

Sir JOSEPH LISTER makes an appeal for funds to erect laboratories in which to manufacture anti-diphtheritic serum. The projected establishment of an "epileptic colony" at Chalfont, near London, has now become a fact. This industrial colony has been founded by the Society for the employment of epileptics. The farm is the gift

of Mr. PARSONS HOWARD, and consists of 135 acres. The foundation stone was laid by him in the presence of Drs. BUZZARD, FRASER, SAVARY, FLETCHER, BEACH, &c., all well known as alienist physicians. Numerous ladies and gentlemen are interested in the charitable work. There are now about 20 colonists. The lady superintendent is Miss DE LAROC, and on the Ladies' Committee devolves the task of furnishing. Dr. BUZZARD made a few remarks on the successful nature of this experiment.

Mr. JUSTICE COLLINS recognises the fact that syphilis may be communicable by the practice of witnesses when in court "kissing the book," as it is called.

In Scotland Sir ARTHUR MITCHELL has retired from the post of Commissioner in Lunacy. He is well known as an archeologist. Dr. FRASER, the Assistant Commissioner, who has held his present post for 18 years, will perhaps succeed him. Sir JAMES RUSSELL, M.D., F.R.C.P. Edin., the first medical man who has held the chair as Lord Provost of Edinburgh, has just terminated his three years of office. Dr. WALTER DICKSON (whose father had been an East India Company's Surgeon) R.N. is the author of many papers on tropical fevers, &c., was a sufferer from glycosuria has just passed away owing to the development of a large carbuncle at the back of his neck. He was late H.M. Inspector of Customs, and had reached his 74th year.

Dr. G. SIMS WOODHEAD, M.D., and G. C. WOODHEAD have been carrying out an extensive enquiry as to the relative value of *water filter* and their efficiency in the prevention of disease. The reports being published in recent numbers of the *British Medical Journal* in a tabular form.

A deputation of the Parliamentary Bills Committee of the British Medical Association has waited upon the Home Secretary (Mr. ASQUITH) pointing out to him the excessive mortality among infants born of *women employed in factories* and certain amendments necessary as to certification of death, with a view to prevention of crime. Sir WALTER FOSTER assured the deputation "that the Government coincided with their reports." He said he did not quite see his way to dealing with "immoral massage establishments," but he quite admitted the accuracy of the deputation's facts as detailed by Dr. ERNEST HART's articles in the current issues of the *B. M. J.*

A girl dying of *plumbism* at the Imperial Enamel Factory, Birmingham, where she was employed as a "brasher" has given rise to considerable excitement, resulting in censure of the foreman of the works, &c.

Dr. GEORGE H. TURNER's report "on the recent out-break of dysentery and diarrhoeal disease at the Suffolk County Lunatic Asylum, Melton" is well put together. He states that the frequent attacks of diarrhoea taking place among the patients at this Asylum terminated in 1893 with the onset of a severe and fatal epidemic, the origin of which he traced to the water supply. Among the organisms found in the contaminated water-supply he notices, besides bacilli, spirilla a large quantity of vegetable matter; and a number of very active amoebae. We regret that he should not have endeavoured to identify these with the amoeba dysenteriae of LEITCH, KILGUTH, LAFLEUR, GONNILLAN, &c., by inoculating cats and dogs with these organisms, so as to produce

typical dysentery would have settled this *quæstio venæ* and thrown some further light upon the relation of these amoebae to the etiology of dysentery and also causal factors of tropical hepatic abscess.

The Home Secretary has given notice that he intends to schedule *brass-casting* and mixing as dangerous occupations. It giving rise to a dangerous complaint formerly styled "brass founder's ague," which is now more definitely known as poisoning by soluble copper salts.

The *British Medical Journal*, beginning with 3rd November 1894, published a somewhat interesting series of letters from divers correspondents entitled "The New Pharmacy" the subject of which is practically the use of drugs in "tabloid" form. This is certainly a *sine qua non* for practitioners in India, and will doubtless eventually meet with their full approval ere long. We will discuss this subject fully in all its bearings in our next epistle, as it certainly merits some notice.

At the West Kent "Medico-Chirurgical Society, Mr. ARBUTHNOT LANE read a paper on the uses of sulphur in surgery and Dr. GEORGE HEASCHELL gave his value in therapeutics of the various iron preparations and salts. He gave his clinical results derived from the administration of various forms of iron to 63 patients at the National Hospital for Diseases of the Heart. The hæmoglobin being estimated before and after treatment by VON FLEISCHER'S hæmometer. He thus proved that the best form to administer iron was BLAUD'S pill "tabloids;" these giving a daily average increase of hæmoglobin to the extent of 1·2 per cent.

Professor CLIFFORD ALBUTT delivered the second of the Armitstead Lectures at Dundee, choosing for his topic "Nerves and Modern Life." He took a most optimistic view of the grand future of the English race. "Mr. T. BRYANT took the chair at the annual prize distribution of the Bristol Medical School, and when he had distributed the various prizes, he gave a pertinent address on "Professional Education," describing the present teaching as grandmotherly, and urged the students not to be mere recipients of knowledge, but all should let individual thought be the groundwork of their medical education; above all, to cultivate the senses; especially let that of sight take the first place. Hands off, said he, until you have thoroughly inspected your patient, and in handling the patient let lightness of touch govern all your actions. You will thereby acquire more accurate knowledge. Dr. M. SKERRITT (the Dean) stated in his report that there were 94 students on the books.

Surgeon-General JOHN FRASER, M.D., C.B., who served for 20 years in the Army Medical Department, we regret to say has passed away, leaving a brilliant record of service as an Army Surgeon. Dr. FRASER was the son of Rev. SIMON FRASER of Stornoway, was born in 1819, was educated at Aberdeen, Glasgow and Edinburgh Universities, M.D. 1840, joined A. M. D. 1841, gazetted full surgeon 1852. In 1858 he became Deputy Inspector-General, served with the Rifle Brigade throughout the Crimean War, during these 6 years, being present and gaining distinction at Alma, Inkerman and Sevastopol (Crimean medal, 3 clasps, Legion of Honor and Turkish medal). He saw much active service during the Indian

Mutiny through Bengal and N.-W. P.; he was at the capture of Lucknow and other engagements, twice mentioned in despatches by Sir HOPKINS GRANT, while serving in Oudh (Indian medal with clasp) and was made C.B. in 1859. For long years after this he served in the A. M. D. He retired in 1879, when he was appointed Honorary Physician to the Queen. In 1892 he was accorded a distinguished service pension. In character this good man was retiring, modest and humane. Since his retirement, he had resided at Edinburgh. On the November 14th, at 21 Chalmers Street, he succumbed to a second attack of cerebral hæmorrhage, and passed from our sight, but not from the hearts of those that knew him. All those whom he met with or associated felt a strong impression as to his indefinable influence upon them for good. He was director of many charities in Edinburgh, where his good offices will be remembered for long years by many of the poor or needy; for he had a helping hand extended to all.

Current Medical Literature.

MEDICINE.

Hysterical form of Raynaud's Disease.

DR. LEVI is of opinion that there is a certain form of RAYNAUD'S disease, which is purely hysterical in origin. It may be caused by, or reappear under, the influence of a strong neurotic element, brought about by the existence of a "subconscious fixed idea." It can be made to disappear, or at least can be considerably ameliorated, under the influence of hypnotism, but leaves an appreciable effect on the vaso-motor system, which can be more easily influenced than before the primary attack. In such cases a history of a previous attack of rheumatic fever is very common, and the parts which were then chiefly attacked are often selected by the condition now under consideration. The onset is sudden, is usually accompanied by urinary symptoms—either auria or polyuria—and gangrene is possible in this condition. Cases of RAYNAUD'S disease, which have been considered of hysterical origin, and which have been treated by hypnotism, are rare; but examples of local congestions in hysterical subjects, or which have been caused by the emotions, are numerous. The above observations are offered by DR. LEVI as a contribution to diseases caused by the emotions. They form an addition to the list, already a long one, of the vaso-motor phenomena associated with hysteria. These symptoms cannot be considered to form a definite disease in themselves, but are a part of a series of phenomena which may take the place of one another, and in the form now described are caused by the same neurosis—hysteria. DR. LEVI accepts the theory of a central origin of hysterical affections, and points out that for their treatment a careful inquiry should be made into the psychological history of the patients, so as to enable the physician to detect any neurotic tendency, and so exclude the possibility of organ disease. He considers that hypnotism is of great value, both as regards the diagnosis and the treatment of such cases.

Chlorosis.

F. W. WARFVINGE accentuates the importance of a clearer comprehension of this disease, as distinguished from the various forms of anemia. He believes in its spontaneous origin, in its almost exclusive occurrence in females, and its appearance at the period of puberty. In fifty cases observed by him in the Sabbatsberg Hospital, some slight and some severe, the quantity of hæmoglobin was, without exception,

much reduced,—from 45 to 85 per cent.,—the average being 62.5 per cent. This diminution is, according to him, the predominant factor in the production of disease. In only four cases was the number of red corpuscles normal (5.1 to 4.7 milligrammes), but in all others it was lowered (lowest, 1.6 milligrammes; average, 8.85 milligrammes), the reduction of the hæmoglobin being, therefore, proportionately much greater than that of the red blood-cells. In twenty cases of anemia of advanced phthisis the number of the red blood-cells amounted, on an average, to 4.89 milligrammes and the hæmoglobin to 80 per cent. Sixteen cases of chronic parenchymatous nephritis showed, on an average, 3.7 milligrammes of red blood-cells and 68 per cent. of hæmoglobin. In pernicious anemia the hæmoglobin maintains a higher, or at least as high, an average as the red blood-cells, which is not the case in chlorosis. As to treatment, administration of iron (Blaud's pills) in large doses is of the utmost importance, while in symptomatic anemias dietetic prescriptions are the chief feature, the iron playing only a subordinate part.—*Hygiea*.

Putrefactive Gases as Predisposing Agents in Typhoid Infection.

DR. ALESSI has made experiments which throw some light upon this subject. Rats, guinea-pigs, and rabbits were confined in boxes with perforated bottoms, and these boxes were then placed over open privies or cesspools, or over receptacles containing the evacuations of the animals. Notwithstanding that they continued to eat well, the animals lost their liveliness, and gradually pined. They were inoculated in this state with a small dose of typhoid bacillus, with the result that they died in twelve to thirty-six hours. The examination showed signs of hæmorrhagic enteritis, swollen Peyer's patches and spleen, and typhoid bacilli in the blood, liver, and spleen. The same dose had no effect upon the majority of the control animals; only a few showed slight symptoms of illness, and one died. These experiments go to show that animals are rendered highly sensitive to the typhoid bacillus by previous inhalation of the gases of putrefaction. ALESSI next investigated the isolated action of the various gases produced in putrefaction, to ascertain if any one were capable of creating the predisposition referred to. The result was in each case negative. The same held good as regards certain mixtures of these substances.—*Centralblatt für Bakteriologie*.

Graves' Disease and Thyroidectomy.

At a recent meeting of the American Neurological Association, DR. F. PETERSON recorded the case of a female patient, aged thirty-four, whom he saw in 1888 on account of certain symptoms which had been coming on during the previous seven years. There were present marked tachycardia (the pulse-rate being 120), proptosis, tremor of the hands, sweating, and flushing. There was enlargement of the thyroid gland, especially on the left side, where the enlargement was so great as to give rise by its size alone to discomfort or even distress. Removal of the more enlarged side of the gland was advised, and a year later this was successfully carried out by DR. HALLEN of Linköping in Sweden, who removed the whole of the left lobe. Improvement began immediately after the operation in 1889 and has gone on steadily, so that now, five years after the operation, there is no proptosis, no tremor or thyroid swelling, and the patient has been able to carry on her work comfortably ever since the operation. The only symptom that remains as a relic of the former trouble is a somewhat rapid pulse. This case certainly suggests that the operation has had an excellent effect upon the condition.

Croup and all Croupous Diseases Curable by Pilocarpin.

SUCH is the title of a paper presented by DR. SZIKLAI at the Eleventh International Medical Congress in Rome. DR. SZIKLAI insists upon a difference between croup and diphtheria. Pilocarpin causes a profuse secretion of physiological mucus between the membrane formed by coagulation of the transudation and the mucous membrane in which it lies, which secretion undermines and thus raises the false membrane. The false membrane being thus loosened, it acts as a foreign body in the larynx, and is coughed up. The further action of pilocarpin should, with the elimination of the formed membrane, the diseased process not come to an end, *is to rob the transudation of its fibrin*; so that a reformation of the membrane under the use of the drug is rendered impossible. DR. SZIKLAI gives the following doses:—

| | | | |
|------------|------------------|-------------------------------------------|--------------------|
| 0-1 years, | dose 1-2 centig. | ($\frac{1}{100}$ to $\frac{1}{100}$ gr.) | pilocarpin pro die |
| 1-3 " | " 2-3 " | ($\frac{1}{100}$ to $\frac{1}{100}$ gr.) | " " |
| 3-6 " | " 4 " | ($\frac{1}{100}$ gr.) | " " |
| 6-10 " | " 5 " | ($\frac{1}{100}$ gr.) | " " |
| 10-15 " | " 6-7 " | ($\frac{1}{100}$ to $\frac{1}{100}$ gr.) | " " |
| Adults, | " 8-10 " | ($\frac{1}{100}$ to $\frac{1}{100}$ gr.) | " " |

DR. S. further advises the use of pilocarpin in croupous diseases of all mucous membranes. It is indifferent whether the drug be taken by the mouth or subcutaneously injected. The earlier pilocarpin is given, the prompter its results.—*Journal of Laryngology.*

Hepatic Colic without Gall-stone.

LEPINE contends that hepatic colic may result from simple spasmodic contraction of the gall-bladder or biliary duct. This opinion is based on both clinical, pathologico-anatomic, and experimental evidence. From the clinical point of view, reference is made to the hepatic colic observed in hysterical individuals as a result of emotion, without discoverable cause in the intestinal evacuations. In some individuals the ingestion of certain articles of food is followed by hepatic colic. A case is cited in which after death no concretions were found in the choledoch duct, although a few small grains were present, together with active contraction of the walls of the duct. In dogs spasmodic contraction of the lower portion of the choledoch duct may be induced artificially. It is maintained that contraction of the biliary canals may be induced reflexly.

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SURGERY.

Progressive Myopia and its Treatment.

IN an instructive paper published by DR. KUHN (chef de clinique of DR. DEHENNE of Paris) in the *Medicine Moderne* of Nov. 10th, that authority tells us that he recognises two forms of myopia—stationary myopia, due to lengthening of the axis of the eye, and progressive myopia, which is accompanied by lesions of the membranes, and which is a kind of glaucoma. The first variety is amenable to the use of lenses properly chosen; the second requires special treatment. The most common concomitant symptoms and lesions of progressive myopia are the perception by the sufferer of broken lines, posterior sclero-choroiditis, atrophy of the choroid, floating bodies, softening and detachment of the vitreous, detachment of the retina, and atrophy of the zonule of Zinn, involving subsequent dislocation of the lens. DR. DEHENNE explains these troubles by supposing that there is hypersecretion of the intra-ocular fluids, with increase of globe tension and consequent lengthening of the axis. The sclerotic is distended, and the choroid, being less distensible than it is, torn here and there. This leads to posterior staphyloma, migration of pigment granules, and the development of chorio-retinitis, with deposit of patches on

exudation. It is these patches which produce at the macula the sensation of broken lines, just as the macula lutea complained of by the patients are caused by the presence of the escaped particles of pigment in the vitreous. The retina ends by becoming detached from the choroid, and the other lesions spoken of above follow. The prognosis need to be most unfavorable, blindness too often being the consequence; indeed, the condition above described was always considered incurable. Iridectomy and drainage had been tried and found wanting in the majority of cases. Since 1882 DR. DEHENNE has had recourse to sclerotomy with invariable success. It is stated that every patient was able to use the eyes without fatigue after the operation. Ophthalmoscopic examination of patients operated on years ago has shown that the lesions had become arrested. DR. DEHENNE practises sclerotomy directly floating bodies appear, and immediate operation is indicated when the sensation of broken lines is complained of together with ocular fatigue, or, *a fortiori*, when posterior staphyloma and choroidian atrophy are made out. The operation is safe and painless; in two days the patient can resume his ordinary occupation.

Injury to the Cauda Equina and Lumbar Enlargement.

PROFESSOR SCHULTZE of Bonn relates an interesting case of which a short abstract appears in a recent number of the *Neurologisches Centralblatt*. A young man aged twenty-one years fell a distance of eight metres on his hips, and suffered afterwards from pains in his legs and sacrum and numbness as low as the knees, with incontinence of urine and feces. After nine months he could walk with crutches, his gait, however, being feeble and his knees and feet rotated outwards. There was some prominence of the second lumbar vertebra, and there was a great amount of atrophy below the knees, the left gastrocnemius, soleus, and tibialis anticus and posticus muscles being almost completely paralysed. On the right side also below the knees the muscles were almost completely disabled. The gluteal regions also on each side were much affected, and so was the region of the sciatic and of the superior and inferior gluteal nerves, while the muscles supplied by the cruralis and obturator nerves remained free. There were also fibrillary twitchings in both glutei. In both peroneal regions, except in the peroneus longus and extensor communis digitorum, there was complete reaction of degeneration, and in the calf muscles partial; while in the glutei there was loss of the direct electrical excitability. The knee-jerk on each side was abolished, and the cremaster reflex was weak. There was weakness of the sphincter ani and of the detrusor vesicæ, but no priapism. Sensibility was much impaired on both sides below the knee and on the back of the thigh, and there was anaesthesia of the scrotum and perineum; while there was hyperæsthetic zone on both sides in the region of POUPART'S ligament. It is not easy, PROFESSOR SCHULTZE says, in this case to decide whether the cord itself, or only the cauda equina, or both, were affected.

Surgical Brevities.

Carbolic Acid applied in official strength in surgery.

1. No systemic absorption attends its use, and hence no danger, no shock.
2. It is a local anæsthetic. Hence there is not as much pain after the operation.
3. It is in a measure a hæmostatic, acting especially upon the capillary vessels.—GARDNER.

Ingrowing Toe-nail.—Remove all of the redundant, hypertrophied, or granular tissues of the skin, and leave the nail alone.—NUDING.

Repeated small rectal injections, it is said, will relieve the intense thirst following abdominal operations.

Alcohol will be used less and less in surgery, because scientific investigation has shown the causes of many of the evils it was imagined to counteract, and because, thanks to Sir JOSEPH LISTER, these causes have been got rid of.—HORSLEY.

Granular Lids.—Curetting and brushing with corrosive sublimate is successful in mild, but not suited to bad cases.—TROUSSEAU.

Management of the Intestines after Abdominal Section.—When the general condition of the patient is fairly good and the abdomen is not distending, and when there is not much colic, let things take their natural course. This advice holds for the great majority of cases.

Stricture.—External urethrotomy with SYME's staff and TEELE's probe gorget, is preferable for all strictures of the deep urethra, where gradual dilatation is impossible.—ROSENSTEIN.

The Treatment of Fractures in Children.

LELOIS concludes a study of fractures in children and their treatment as follows: Fractures in young persons differ from those in adults by the frequency of their seat at the junction of the epiphysis with the shaft, the preservation of the periosteum and the rapidity of union. This last fact is due to the greater activity of the elements that participate in the reparation of bony tissue. Frequently an excess of this process gives rise to the formation of an undue amount of callus. Such a hyperplasia in the case of fractures about the joints may result in interference with the restoration of normal mobility. Protracted immobilisation must be carefully avoided in the treatment of fractures about joints, and should give way to massage and early passive movement. The treatment of fractures in children by these methods is in most cases attended with excellent results, both as to the speediness of recovery and the restoration of function.

The Therapeutic Value of Ice in Ophthalmic Surgery.

MCGILLIVRAY commends the topical employment of cold in ophthalmic surgery. In case of recent injury to the eyeball the eye is bathed with a sublimate solution (1:5,000), the patient is put to bed and instructed not to open his eyelids, and ice-compresses are applied immediately and continuously. If, after a day or two, no inflammatory reaction has set in, the compresses are withheld. In cases attended with inflammation, the application is continued till the process has subsided. Each compress is removed as soon as it begins to lose its cold feeling, and a fresh one is applied.

Ashes in the Treatment of Wounds.

DR. PASHKOFF, in *Novosti Terapii*, emphatically recommends dressing recent wounds of any kind with a thin layer of ashes prepared *ex tempore* by incinerating some cotton, stuff, or linen. He says dirty-looking wounds should be previously washed out with a boracic lotion. The ashes, with blood, form a protecting scurf under which the lesion heals very rapidly. Of twenty-eight cases of cuts, crushes, stabs, etc., treated after this method, twenty-six quickly healed without any trace of suppuration.

Circumcision for Incontinence of Urine.

A BOY ten years of age had a precipitate way of passing his urine; had a great deal of trouble at school on that account, as he had to run out all at once. I found his trouble was due to a tight prepuce, and he was at once relieved by circumcision.—DR. C. W. SHAW, in *Pittsburgh Med. Review*.

OBSTETRICS AND GYNECOLOGY.

Speedy Method of Dilating a Rigid Os.

DR. FARRAR (Gainsborough) relates two cases of rigid os, in one of which, after endeavouring vainly to relax the cervix by the aid of chloral, bromide of potassium, and morphia, followed by most persevering attempts at digital and mechanical dilation, with and without chloroform, he applied a 10 per cent. solution of cocaine preparatory to incising the edge of the os. After five minutes, on introducing the finger as a guide to the scissors, the os was found widely dilated. In the second case, which, like the first, was that of a primipara, forty-eight years of age, where no dilatation occurred, although the same means as were tried in the first case were used, he waited three days, and then applied the cocaine. In four minutes the os was found to have yielded. He considered the dilatation to be due to the cocaine in both cases.—*Lancet*.

Old Primiparae.

BIDDER has published a monograph on this subject. He finds that primiparae over 40 are common in Dorpat, and from his own observations he notes no special anomalies in pregnancy. It seems, however, that kidney complications and eclampsia are relatively frequent. Abnormal presentations are not more common than in younger mothers. The duration of labor is distinctly longer, but only in the first stage. Operative interference, especially forceps, is frequently needed. Ruptured perineum is not more frequent than in primiparae; the same applies to complications in childbirth. Severe puerperal diseases and mortality from the same are not more common, nor is the mortality amongst the children of old primiparae specially high. In fact, the old theory that old primiparae run great risk is a mere piece of *a priori* reasoning.—*Brit. Med. Jour.*

Maternal Impressions.

DR. HUBERT WORK has a paper on this interesting—if somewhat contentious—subject. He gives the result of his inquiries from several men who have had abundant opportunities for forming opinions or receiving impressions in reference to the matter, and the balance of their evidence at least leans to the opinion that maternal impressions certainly do influence the foetus in utero. He also enumerates several instances which have either come within his own experience or which have been related to him by the practitioner in whose experience they did occur, and it must be confessed that there are some very striking coincidences. He then states his conclusions in the form of the following propositions: (1) that both physical and mental defects follow maternal impressions with such frequency as to establish the relationship of cause and effect; (2) that these conditions are the result of changes in the blood; (3) that the probability of defects in the foetus from mental causes is dependent upon the mental habit, or characteristics, or susceptibility of the mother; (4) that maternal anticipation of a defect in the child has, in itself, no influence in the absence of a strong impression; (5) that the impression need not be lasting to cause defects; (6) that personal maternal injury is no more likely to mark the child than the sight of it in another; and (7) that the defect is not necessarily similar in location or appearance to the object creating the impressions, but is likely to be. The apparent constancy of likeness is due to the reporting of such cases only. Among these propositions there are no doubt several which would not receive universal assent.—*Philadelphia Medical News*.

The Coup de Grace in Labor.

A CORRESPONDENT sends the following, for the truth of which he vouches:—A young doctor, who began his practice in Texas, west of Houston, was called to a confinement case

in which he, being green and nervous, naturally had some trouble, the patient seeming unable to make the supreme effort for final expulsion. The only other occupant of the wretched quarters was an old crone in a sun-bonnet who was silently but steadily rocking herself near the foot of the bed. Finally the old woman croaked out, 'Doc, I wouldn't bother any longer with that woman, I believe I'd quill her and have done with it.' The medical man not knowing what 'quilling' meant answered that he did not quite see the necessity for that yet. The old woman repeated this suggestion several times until finally the nervous, exasperated man turned angrily on her and said, 'Madam, I'll be it—if I will tie it. If you want to quill her you can do so, but I won't.' The crone took from the wall a turkey-wing and drawing a feather from it proceeded to fashion something like a long quill tooth-pick and filling this with snuff from her own private stock leaned over the patient, and as the next pain came blew the snuff into the woman's nostrils. Quick as a flash the woman responded with a giant sneeze and the child was born with the sneeze. 'Thar,' said the old woman, radiantly, 'I knowed mighty well that thar bust would make her break her holt.' And it did, to the great instruction of the attending physician."—*N. Y. Med. Rec.*

Fatal Metrorrhagia in Purpura.

RESNIKOFF observed this condition in a girl, aged 15, with no hereditary history. Diffuse ecchymoses and petechiae appeared for eighteen months; then bad attacks of epistaxis took place and continued for several months till the period was first established. Clots were discharged for a week. For three months the epistaxis ceased, and at the end of that time recurred. The second period was seen nine months after the first, and proved fatal. For the first week the shew was slight; during the second clots were passed and symptoms of acute anemia set in. Notwithstanding the application of hæmostaties, the patient died of the hemorrhage on the nineteenth day.—*Gazette Hebdom. Med.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The Vagus and the Secretion of Acid by the Stomach.

LEUBUSCHER and SCHAFER, who are duly corroborated by PAWLOW, SCHUMOVA, and KREHL, have proved by experiments that section of both vagi below the recurrent laryngeal nerves induces waste, loss of appetite, and ultimate death. In animals in which such section was performed no free hydrochloric acid was found in the stomach, and the gastric juice exerted little digestive action.—*Centralblatt Medicin.*

The Function of the Supra-renal Gland.

As the result of a further study AULD concludes that the functions of the supra-renal gland are the destruction of certain effete products of metabolism which are of the nature of ptomaines, and the elaboration of a secretion which is absolutely essential to the blood (hemopoietic). The destruction of the gland is followed by an auto-intoxication and a profound alteration in the chemistry of the blood, which entails, amongst other things, degenerative or nutritional changes in the nervous and digestive systems, and derangement of the color-regulating metabolism.—*British Medical Journal.*

Pathological Changes in Mucous Membranes.

Mr. D'ARCY POWERS exhibited to the British Medical Association a series of preparations of the conjunctival and vaginal mucous membranes taken from rabbits and guinea pigs which had been subjected to mechanical and chemical

irritation. Many of the epithelial cells presented appearances which were identical with those described as being parasitic when they were met with in cancer. The changes in the epithelium were summarised as a general vacuolation of cells; various forms of intra-cellular oedema; epithelial "pearls," collections of leucocytes, and the spaces left after these leucocytes had migrated. The series of preparations shewn on the present occasion indicated that many squamous epithelial cells had the power of phagocytosis, for in no other way could the remarkable intra-cellular appearances be explained; cells were shewn containing a leucocyte, and others containing a microcyte. Partial necrosis of the cell also took place as a result of irritation, and there was an invasion of large eosinophile cells into the conjunctival epithelium.

Cholera and Flies.

COMMENTING on the recent outbreak of cholera in the Gaya Jail, Surgeon-Major R. MACRAE noticed the presence of swarms of flies in the jail and their easy access to either excreta or food, and contends that even though the comma bacillus may not be the cause of cholera, still it is intimately associated with that disease and the agency which can disseminate that micro-organism is also competent to distribute any other material which may be the cause. He points out that though no direct proof is tendered of the actual transmission of cholera from excreta to food and water is universally made the scape goat, still the probabilities of such transmission are greatly assured by PROFESSOR HAFPEKE's discovery of comma bacilli in sterilised milk exposed in new vessels to which flies were permitted free access, and it has been found that these flies had equally free access to ill-managed cholera dejecta.

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Eucalyptus useless against Malaria.

UNDER the heading "The Passing of the Eucalyptus," the *Journal of the American Medical Association* states that the Consuls of the United States in Europe report unfavorably on the supposed virtues of the eucalyptus. The Trappist monks of Tre Fontane, three miles from Rome, have planted since 1873 no fewer than 50,000 trees on a few acres. In 1880 the Government established an agricultural colony of penitentiary convicts in quarters supposed to have been already improved by the eucalyptus. The convicts were surrounded by hygienic conditions far superior to those of the laborers of the Campagna, yet nearly all became stricken with malarial fever within a year after their arrival. In 1883 all the inhabitants of Tre Fontane were attacked. The guards at the colony had all to be changed. The efficacy of the eucalyptus for the improvement of the air is no greater than that of the elm, plane, and mulberry. If it recommends itself by rapidity of growth, the trees just mentioned recommend themselves by being hardier and more easily grown. PROFESSOR LIVERSIDGE, of the University of Sydney, stated long ago that in the southern hemisphere, where the eucalypti thrive best, there are forests of these trees where malaria is specially noxious. The tree itself is no ornament, the continually spontaneous peeling off of the bark producing an unsightly effect.

Disease and Intemperance.

WE have already on several occasions called attention to the unwarrantable construction which has been placed by certain persons—perhaps not altogether disinterested on the Report of the Collective Investigation Committee with regard to the connection of disease with habits of intemperance. In spite of our frequent warnings and explanations on the subject, the misleading assertions continue to be made, and in

consequence the following memorandum, signed by DR. NORMAN KERR, Chairman of the Inebriates Legislation Committee of the British Medical Association, has recently been drawn up. Copies of the memorandum can, we understand, be obtained on application from DR. NORMAN KERR, or from the General Secretary of the British Medical Association. The following are the terms of the memorandum :—

"The attempt to construe the statistics published by the Collective Investigation Committee of the British Medical Association as proving that intemperate drinkers live longer than teetotallers is quite unwarranted, and is in direct opposition to the conclusions of the reporters themselves as expressed in their report. Teetotalism, as they suggest, has only of late years been largely practised in Britain, but drinking to excess has had great antiquity; therefore, the average age of living abstainers must be less than the average age of the rest of the community. So that the average age at death of abstainers being 53 years as against 58 in the cases of drunkards at death proves nothing against abstinence. The accuracy of this explanation is proved by other tables given in the report. When death under 30 years were excluded, the average age of the abstainers was about four years more than that of the decidedly intemperate. When deaths under 40 were excluded the average age of the teetotaler at death was more than five years greater than that of the intemperate. To guard against misrepresentation or misunderstanding, the Committee expressly stated that the returns reported on afford *no means* of coming to any conclusion as to the relative duration of life of abstainers and 'habitually temperate drinkers;' that habitual indulgence in alcoholic liquors *beyond the most moderate amounts* has a distinct tendency to *shorten life*, the average shortening being roughly proportionate to the degree of indulgence; and that *total abstinence* and habitual temperance *augment* considerably the change of death from *old age and natural decay*.

The Curse of Kissing.

A WESTERN contemporary waxes warm on the subject of kissing being a sanitary sin, even though when properly applied, both as to time and place, asculation may be mutually agreeable and fairly healthy. He deprecates the practice of beslobbering helpless infants and snatching kisses from young girls and unprotected females whenever opportunity offered. He points out that syphilitics, tobacco chewers, tuberculous subjects and persons with very bad teeth are the greatest kissers of infantile and youthful humanity, and consequently the greatest transmitter of their respective maladies. He cautions as to the heed of implanting terrible diseases by the time honored yet highly insanitary "sick-bed kissing" and applying the warm lips to the clay cold forehead or lips of the dead, and winds up an interesting discourse by telling every one in the world that we should carefully instruct our little ones in 'mouth hygiene' and never neglect an opportunity to strike at the mouth which bears a mucous patch or where lurks the poison of phthisis or to defend the defenceless babe from the onslaughts of the male and female kissers.

Exhumation after fourteen years' Burial.

ON 13th November, by licence of the Home Secretary, I inspected the contents of a coffin which had been buried in April 1880. The reasons for the licence are not material. The man was 23 years of age at the time of his decease; the cause of death was "peritonitis," and he was buried in an iron coffin, and in a stratum of clay. On lowering the lid of the coffin it was found to be full of water. It was placed upon a bier, and a hole driven through it to drain it. The name-plate on the lid was still quite legible. On removing the lid

a powerful nauseous odour came from the remains. The linen was discolored, but in a fair state of preservation. The features were obliterated; the hair and teeth still recognizable. The skin and the whole of the soft tissues were converted into a soft, greasy, yellow-white, soapy or putty-like material, crumbling upon the slightest touch, and exhaling a loathsome odour. The skull was dislocated from the spinal column, the vertebrae of which were scattered about in various parts of the coffin; the lower jaw was dislocated from the skull; the other bones were dark colored, perfectly smooth, and without a vestige of periosteum, appearing as if macerated, and were easily removed from one another and from the slimy mass of adipocere surrounding them. The lid had been soldered on to the coffin at the time of interment, and the period of entrance of the water is conjectural. The result, apparently, was that circumstances were here combined to retard decomposition to the ultimate extent possible, so that after fourteen and a-half years' burial the corpse was, even to an "acclimatised" dissecting-room curator, abnormally repulsive. —J. R. M. BRENNAN, M.B.C.S., L.S.A.

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THERAPEUTICS AND PHARMACOLOGY.

Physiological action of Alcohol.

DR. DAVID CERNA thinks that small doses of alcohol excite the peripheral motor and sensory nerves, stimulates the cerebral functions, accelerates the cardiac beats, raises arterial pressure and the bodily temperature, and have little or no effect on the respiratory function; but in large doses it not only acts as a depressant in all the foregoing and causes lack of co-ordination, but also by first increasing and then diminishing reflex actions enhances coagulation of the blood and finally kills by failure of respiration. By diminishing the absorption of fats and the excretion of tissue waste, increasing the activity of the kidneys, eliminating carbonic acid, assisting the absorption of oxygen, conserving tissues and generations, vital force, alcohol may be looked upon as a food that aids digestion, and is mainly burnt up in the system when taken in moderate amounts. In longer amounts it has a decided antipyretic action; but its excessive or long continued use causes spiral degeneration of the axis cylinder of nerve-fibres, produces cirrhotic changes and leads to epilepsy, insanity, paralysis and other maladies, while in toxic doses it produces hyperemia of both brain and spinal cord and destroying the oxidizing power of the blood, separates the hæmoglobin from the corpuscles.

Diphtheria Treatment.

AT Halm's clinic, Berlin: Application of ice collar, hourly gargling or spraying with 4 per cent. solution of chlorate of potassium, or 1 to 4,000 solution potassium permanganate in cases where fetor is present. In usual diphtheria, syringing of nasal cavities with 2 per cent. boric acid or 1 to 4,000 permanganate solution, plugging nostrils if epistaxis occur. Steam in cases of laryngeal obstruction. If urgent dyspnoea, low tracheotomy, removing cannula on fifth or sixth day.—*Dent. Med. Week.*

Treatment of Purulent Ophthalmia in Infants.

M. KALT, of Paris, treats the above serious affection by abundant irrigation by means of a 1 in 5,000 solution of potassium permanganate. The apparatus devised by him for this purpose consists of a small funnel, the nozzle of which is introduced between the eyelids, while the other extremity is connected by means of a tube with a reservoir placed at a height of thirty centimetres above the eye. Each irrigation

is effected every morning and evening with two litres of the solution at a temperature of from 80° to 85° C. Where corneal ulceration exists four daily irrigations must be practiced for the first three or four days, after which they may be made less frequently. The douching must be continued until all secretion has ceased.—*Med. News.*

Rationale of the Cold-bath Treatment of Typhoid Fever.

It is already known that the employment in typhoid fever of what is denominated in this country and in Germany as BRAND's method (it should be more justly called CURRIE's method) has the effect of increasing the flow of urine. But what was not hitherto known is the increase of urine toxicity that is brought about by this mode of treatment. In typhoid fever the normal toxicity is diminished by two-thirds. The cold-bath treatment restores from the first few hours the toxicity to the normal and perseverance in the method determines its further increase (sometimes to double the normal). It is evident that by this means the system is cleared of a large quantity of toxins, and it would seem that it is in this direction that he must look for the beneficial effects of the cold bath in apparently desperate cases. This observation is due to a French army surgeon, M. AUBERT.—*Lancet.*

Treatment of Chronic Articular Rheumatism.

LETULIE recommends rest in bed, the repeated application of the actual cautery to the affected articulations, passive movements of the joints, sulphurous baths, alternative with warm douches of simple or sulphuretted water, in conjunction with the internal administration of potassium iodid in doses of from 7½ to 30 grains in the twenty-four hours.—*La Presse Medicale.*

Chloroform Treatment of Phthisis.

In the *Journal de Medicin de Paris*, M. POTTER urges that by the inhalation of chloroform the bacillus of tuberculosis is destroyed *in situ*. It is not necessary to produce anaesthesia, but short of this inhalations should be employed at brief intervals daily for a considerable period.

A Good Pepsin Mixture for Dyspepsia.

| | | | |
|------------------------|-----|-----|--------|
| Pepsin, B. P. | ... | ... | 3j. |
| Acid. hydrochlor. dil. | ... | ... | 3ij. |
| Glycerini | ... | ... | 3vj. |
| Tr. carb. co. | ... | ... | 3iv. |
| Inf. gent. ac. | ... | ... | 3viij. |

Put the pepsin in a mortar, add the acid and triturate well, then add the glycerine and other ingredients in their order.—*C. & D.*

Zinc and Belladonna in Whooping-Cough.

| | | | |
|---------------------|-----|-----|------------|
| R. Zinc Sulphatis | ... | ... | 4 grains. |
| Tincture Belladonnæ | ... | ... | 48 minims. |
| Aque Anisi, ad. | ... | ... | 2 ounces. |

M. Sig.: Twenty drops every third hour for a child one year old, thirty for a child three years old, sixty for a child five years old, and so on.

Pruritus Ani.

A FAVOURITE prescription of DR. HAYES AGNEW, recommended as almost a specific in pruritus ani (says the *Therapeutic Gazette*) is:—

| | |
|-----------------------------|--|
| R. Sulphate of zinc. | |
| Alum. of each, equal parts. | |

Pignola Macaroni.

TAKE one cup of macaroni, add one pint of milk, two tablespoonfuls of flour, salt to taste, and six tablespoonfuls of pignola roasted and chopped fine. Put into a shallow pudding dish, and bake in a moderate oven until nicely browned.

Apples Stewed in Tomato.

TAKE stewed and strained tomato, and cook slightly tart apples in this as in water. Serve without the addition of sugar. The combination of the apple and tomato makes the sauce taste sweet. Salt may be added if desired.

Correspondence.

DR. BAHADHURJI ON MEDICAL EDUCATION AND THE MEDICAL SERVICES OF INDIA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The following is the speech I made at the recent meeting of the national Congress in moving Resolution XIII which is as follows:—

"This Congress is of opinion that the present constitution of the higher medical service is anomalous, and indefensible in principle, injurious in working, and necessarily costly. The time has arrived when, in the interests of the public, the medical education and the advancement of the medical service and scientific work in the country, and also in the cause of economic administration, the civil medical service of India be reconstructed on the basis of such service in other civilised countries, wholly detached from and independent of military service. That the very unsatisfactory position and prospects of the members of the subordinate civil medical service (Assistant Surgeons and Civil Hospital Assistants) compared with members of similar standing in other departments of the public services, require thorough investigation and redress, and the Congress prays the Government to grant an open inquiry by a mixed commission of official and non-official members. While viewing with satisfaction the desire of the Imperial Government to reorganise the Chemical Analyser's Department, with a view to its administration as an independent scientific department, the Congress earnestly hope that Government will not fail to recognise the responsible and meritorious work of the assistants and place them on the footing of specialists."

The subject of the resolution I have just read to you has engaged such a considerable share of public attention since it was first spoken to from the Congress platform last year, that I need hardly enter into details again. The question of Simultaneous Examinations is, no doubt, of great importance to the public, but you will agree with me that the subject of the medical service of the country is of equal, if not greater, public importance, and that it is a matter of surprise and regret that it should have so long remained unnoticed by our popular leaders. They would seem not to have noticed that, in the very matter of Simultaneous Examinations, the Covenanted Medical Service of India most directly demonstrates that the opponents of Simultaneous Examinations have rather overstated their case and drawn on their imagination as regards their *sine qua non* of a long residence in England for the acquiring of that mental, moral and magnetic equipment which alone can impart the necessary administrative ability, courage, and social adaptability to Indian youths as members of the I. C. S. For, indeed, many an Indian member of the Covenanted I. M. S. had only to voyage to England to pass the Burlington House Examination to obtain his commission; and this accomplished (in a few weeks after arrival in England), he had only to put in his regulation six months at Netley before he returned to India as a member of the I. M. S. What, then, have the opponents of Simultaneous Examinations to say to the fact of not only Indian members of the Covenanted I. M. S. acquiring administrative ability, courage and social adaptability—qualities required in no smaller degree in the military than in the civil department—but also imbibing a martial spirit, by the mere effort of a trip across the sea to obtain a commission in her Majesty's army? To examine briefly the subject of the resolution, let us study the different parts separately. I

shall deal mainly with the first two sections, leaving the rest to my friends who will follow me. The first part says that the constitution of the higher Civil Medical Service is anomalous, indefensible in principle, injurious in its working, and very costly, and requires to be revised and remodelled on the basis of what obtains in other civilised countries. To realise the absurdity and the mischief of the present constitution of our Higher Civil Medical Service, let us contrast it with what it is all the world over. The Civil Medical Service of any country is concerned with the several departments of education, of sanitation, of special scientific and expert work, as of chemical analysis and of civil medical relief. The practice outside India is to recruit the service from the open profession of medicine and science, the necessary qualifications being special training and ability and no mere ordinary practising license or degree, and to find men for posts and not posts for men. But in India it is far otherwise. The selection is restricted to a small class of men who form the stock-in-trade, so to say, of a military dépôt, called the Indian Medical Service. The competition for this service is open to any who possesses a British qualification in medicine, surgery and midwifery, and many of our graduates and even plucked students who could afford a trip to England scored such easy victories in the competition not many years ago that their overwhelming numbers raised an alarm and led to the closing of the service against them for the time being. It was thrown open again, no doubt, but as is well known some agency or mystic force has since prevented the Indian candidates regaining their old position in the pass list. This covenanted military service requires for its own military purposes—the purposes for which its enlistment is intended—some 170 men; but, like other dépôts which always have a large stock of articles lying idle, this service dépôt has in its fold more than twice that number of men for whom the Military Department has neither room nor work, and it is for these supernumerary military men that work is found in the Civil Department, as posts become available. It is these extra or floating military men that are trotted out in plain clothes as professors or political agents, guardians of jail birds or Civil Surgeons, Sanitary Commissioners or Chemical Analysts, etc., etc., under orders from the Civil Military Surgeon-General, i. e., the chief *medecin militaire* in plain clothes. Scientific and expert advisers to all other civilised Governments are individuals who have worked at special and scientific subjects and possess special qualifications. But in India it is a single individual who advises Government on all matters connected with the science of medicine. He is the Civil Military Surgeon-General, i. e., the Military Surgeon-General in plain clothes, distinguished from his brother officer in uniform. He rises to that position not by virtue of any scientific work or merit, but by a special process of development through the grades of Captaincy, Majorship, Major-Generalship, to which last he must gravitate by the mere weight of years. And the mere fact of his donning the hat of the Surgeon-General is taken by the Indian Government to infuse into his head expert knowledge not in one but in all the different departments of science and medicine? Again, the genesis

of a medical professor in India is equally peculiar. All the civilised world over it is by a special training in a special subject after graduation that one becomes a professor. But in India the course of training requires at the outset two years' shooting and messing with a regiment, followed by the experience of a general practitioner, as a Civil Surgeon, or as a guardian of jail birds, or of some such other work. It is after this special process of development or rather degeneration that a *medecin militaire* gets himself electroplated as a professor, should he happen to possess the special connections wherewith to excite the electric fluid in the Surgeon-General's Office. But this is a wonderful fluid; it has the power to make a Professor of Pathology for instance, disappear from the chair of Pathology only to reappear as a Professor of Midwifery! That this is all anomalous and indefensible in principle, and that neither the official medical professor nor the Government medical expert is a genuine article needs no argument to establish. That such a constitution of a Civil Medical Service must be very injurious in its working will be really accepted, and can be easily demonstrated by a few actual examples within one's personal knowledge. Examples are but illustrations of the evils of a system of which the special cases are themselves the victims, and it would be only narrow-mindedness to construe the citation into personal attacks. Under this absurd system, a Professor who has never had any training in Biology—has not even looked into the inside of a frog—becomes gifted with the audacity, not to say imposing impudence to pretend to examine our Arts and Science Graduates in Comparative Anatomy. Under this absurd and mischievous system, the Professor of Zoology has to be a born Ophthalmologist and *vice versa*, and what does his teaching in Biology consist of? Some two dozen readings from text-books from a pulpit decorated with bottled pickles of zoological specimens; the readings over, the class repairs to a museum where a single personally conducted tour by some obliging Curator or Secretary begins and completes the course of practical zoology! Is this not a fraud both on the University and on the public? Under this unnatural system, a Chemical Examiner, who has not a day's experience of his work to boast of, and whilst he is yet learning his work from his assistant, considers it all a very natural thing to report on the work of his assistant, from the superior place into which he finds himself pitchforked. And again, the teaching of Physiology, for instance, may continue to be of the most primitive kind, till an outsider exposes it, works violent changes in the College, and causes the teaching of this very important subject to be entrusted to capable and proper hands. Under this system again, Government by their attempting to extort all possible knowledge from a medical hand which they, as a matter of course, cover with the Surgeon-General's topee when the individual arrives at the age prescribed for such investiture make themselves the laughing stock of the thinking world at the instance of some novel ideas extracted from their Surgeon-General. Not so long ago a Surgeon-General deliberately declared that experimental physiology had nothing to do with vivisection. It does not require much technical knowledge

to understand that the very contrary is the case, for physiology deals with the phenomena of life, and naturally therefore, experimental physiology deals with experiments on living beings! Not so long ago our Government medical advisers did not know the ordinary requirements of scientific research. Three laboratories in the Bombay Presidency have been rendered useless for the purposes for which they were built. One has been turned into a carcass incinerator, another into a godown, and the third one LORO HANAN, the Governor of Bombay, assured us the other day would be put to some useful purposes. Whilst giving this assurance he could not help expressing his surprise that there should be any comment on such waste of public money; for after all the expenditure on these buildings was not a matter of lakhs but only thousands! The *Times of India* remarked the other day that a potter of ice or a pice worth of kerosine oil would give a bacteriologist any desired temperature for his cultivation purposes. This knowledge was unfortunately not in the possession of the highly paid scientific advisers of Government, who were compelled to vote further sums of money for the removal of their scientific and their baggage to some shady regions! But one need not multiply these instances. The monopoly of the I. M. S. not only recoils thus on the heads of the monopolists themselves, but, what is more important from the point of view of the interests of the country itself, it prevents all growth of talent in the country, and degrades the profession of India, as we shall see presently. It has been urged that the appointments must be so reserved for the Imperial purposes of a *military reserve*. To begin with a reserve of nearly 400 men for an effective service of less than half that number is an absurdity in which the Military Department and its apologists alone can revel, but the reserve argument accuses the Government of hypocrisy and dishonesty. The Government have publicly declared that the medical schools were founded for the cultivation of the medical science of the West, for the benefit and happiness of the Indian people, and "not for any Governmental or executive wants," and that they fostered the growth of science and higher education for their own sake. If these then be no longer their intentions, or rather the intentions of our latter day Government, let them say so honestly, and not keep posing as honest patrons of science and education. The conditions under which the growth of science and medical education has suffered so long, carry their own condemnation, and it was time the Indian people, and not only the profession, rose to a man to appeal to the authorities to emancipate medical education and science from the thralldom of an aggressive Military Department, which has no moral or legal right to the monopoly it has built up for itself. The I. M. S. covenant is a purely military covenant, and has no reference whatever to any right, much less an exclusive right to civil appointments. It is only by a thorough emancipation of medical education and science, by throwing open their fields of work to the best talent available in Europe or in India, that India can hope to advance to a forward place in the march of civilisation in the matter of scientific assimilation and growth. Scientific and Medical Congresses in a land where science and the profession of medicine are allowed no fair play, and where there is no such thing as a scientific profession, are but

false emblems of scientific progress. I was asked to join the Calcutta Medical Congress. I should have been delighted to take part in any proper Medical Congress. But I did not join this Calcutta Congress for the simple reason that it is no genuine Congress of a liberal homogeneous profession. Compared with a genuine Congress, it had the elements of sham and hypocrisy in its very constitution. For, look the facts straight in the face. Here is a group of men—the monopolists—asking their bondsmen to rub shoulders with them just for the purposes of a good gathering. Men who have been looked upon as an inferior lot, incapable to rise to the position of their teachers in their own *alma mater*, unfit to take part in the work of scientific medicine, are now suddenly considered fit to discuss scientific work with "masters and superior persons"! A mere Congress gathering gives no unity to the profession in India, and removes not the unjustifiable limitations placed on its Indian members. The question of economy having been fully discussed on previous occasions, need not be again taken up now. Only recently there was some further military plunder, and in the matter of some dozen appointments in the department of jail administration increasing the military expenditure by thousands. It was time this whole question was gone into by an open public inquiry.

To turn to the second part of the resolution, viz., the subject of the Subordinate Medical Service. It has three branches. First, the Assistant Surgeons. These our graduates in medicine, who have passed both educational and professional tests higher than those required for the I.M.S. They begin as Assistant Surgeons on Rs. 100 a month and rise to—well—to old Assistant Surgeons on Rs. 200 a month, fit to retire on the grand pension of Rs. 100, whilst members of the Military Service, who sponge on the Civil Department, rise from Rs. 500 to Rs. 2,500! The Assistant Surgeons do, and have done, all along the work of the Civil Military Surgeons, but without their pay or their position! They have done even distinguished field service as volunteers in the Afghan and other campaigns. The highest career is open to members of every other faculty of our Universities, but it is altogether closed to members of the medical faculty. It is surprisingly strange that members of sister faculties did not perceive so long the unjust treatment accorded to their fellow graduates. A middle grade service, the Uncovenanted Medical Service, on the lines of the uncovenanted counter-part of the I. C. S., was specially created more than 25 years ago for the employment of Indian graduates, but the Military Surgeon-General has contrived to make it a complete dead letter by absorbing every possible appointment above the lowest grade into his military schedule. If, indeed, in twenty years the medical school of Bombay, for instance, has failed to turn out a fit enough graduate for the Uncovenanted Medical Service, it was high time the College constitution was overhauled. The Assistant Surgeons have often complained. Instead of redress they have received nothing but threats from domineering Military Surgeons-General, whose department contrived to keep out all evidence before the Public Service Commission in the matter of the gross wrongs inflicted on their victims of the subordinate service. It was time the

public moved in the matter and demanded an open public inquiry. Of the other two enlistments for the subordinate service one is for purely military purposes and is open to Christians only. But see what difference the element of religion makes in the treatment accorded to the two classes. John the Christian and Pandu the non-Christian both seek admission to their respective services. John the Christian may not know more than the High School 4th standard reading, writing, and sums, but Pandu, the non-Christian, must pass a much higher test. They both go through the same professional course and examination. If anything, Pandu has to undergo a severer examination. John the Christian begins as a Military Apothecary and works under regimental Surgeons. His salary ranges from Rs. 50 to Rs. 450. He may, however, be promoted to the uncovenanted grade and given Rs. 750 by being found a post in the Civil Department. His new designation is Assistant Surgeon, I. M. S., and he rises from the grade of a Lieutenant to that of a Major. But Pandu the non-Christian begins as a Hospital Assistant and dies a Hospital Assistant. His work is as vast as it is responsible. He practises medicine, surgery and midwifery. He it really is who dispels the ignorance and prejudice of the masses in regard to the western system of medicine. He treats a thousand times more cases in a month than the highest officer of a hospital does in a year. On his judgment, intelligence and integrity depend the life of his fellow citizens in the mofussil, questions of life and death turning upon the nature of his evidence in medico-legal cases. But alas! the respectability and responsibility of this most important servant of the State are in an inverse ratio, and that too in very abnormal proportions. One feels almost ashamed to say that the non-Christian Pandu, who does such responsible and excellent work for his Government, is paid no higher salary than is paid to a senior puttawalla in the hospital, or a cook, or a coachman. The scale of his pay is Rs. 16 to Rs. 80 odd. For this great difference in treatment accorded to the Christian Apothecary on the one hand and the graduate Assistant Surgeon, than that the specially favored class of military apothecaries belong to the Christian race? Now that it has been familiarised with these manifest wrongs which scandalise the fair fame of British justice and fair play is it its bounden duty to appeal to authorities for immediate redress. Let every presidency town hold public meetings to memorialise Government for a public inquiry such as the Congress prays for, and let the leaders of the people do their duty by the people and work for this public cause—a cause so intimately bound up with the material progress of the country.

Yours &c.,—K. N. BAHADHURJI, M.D., Lond.
MALABAR HILL, BOMBAY, 16th January 1895.

DR. CROMBIE ON QUARTAN AGUE.

TO THE "EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Will you kindly allow me most respectfully to point out what I feel is an experience quite at variance with that expressed by so excellent an authority as Dr. CROMBIE, who in his article on the fevers of India says: "*Quartan ague is so rare that it may be practically left*

out of account. I have only had to treat one case of *quartan ague* in the whole of my twenty-two years' service in India."

I have been practising for six years in the villages of the malarial district of Dinajpur, and during this time I have treated more than a hundred cases of *quartan ague*. Now I am in charge of the Raiganj Charitable Dispensary, where many patients come, who suffer from *quartan ague*. When asked, they clearly and distinctly state that they get the paroxysm every third day, the interval being seventy-two hours. I think that nearly 5 per cent. of the cases of malarial ague here are of the *quartan* type, and I believe that medical practitioners in the malarial districts of Northern Bengal, will corroborate my experiences as regards *quartan ague*.

Yours, &c., HARA KALI SEN, V.L.M.S.,
RAIGANJ, 11th January 1895.

NOTES ON THE ANNUAL RETURNS OF THE N.-W. P. AND OUDH DISPENSARIES. A SUGGESTION.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Last year a departure was made in tabulating the surgical work of the Civil Surgeons in the above returns, by noting against each officer's name the time he had spent on leave during the year.

The desirability of this procedure cannot be doubted, as it shews at a glance what work the same officer would have done if he had *not* gone on leave. I beg to suggest, through your columns, that similar remarks may in future be added against each Assistant Surgeon's name also.

Yours, &c., ASSISTANT SURGEON, N.-W. P.

MEDICAL FEES.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I shall feel obliged if any of your readers will kindly inform me as to the medical fees authorised to be charged per visit by Assistant Surgeons and Hospital Assistants. As far as I am aware, they vary in different localities, being modified by the pecuniary circumstances of the patients. This leads to friction during adjustment. Is there any scale laid down by Government, so that they may not fall into the error of asking more than their dues, or in the event of patients refusing to pay the prescribed fees, there may be a way open for recovering them?

Yours, &c., J. W.

ACROMEGALY AND GIGANTISM.

DR. STERNBERG concluded, at the Congress of German Physicians, that the study of the skeleton of the giant shewed that there exists a physiological and a pathological gigantism, and that the latter are cases due almost entirely to acromegaly. He thinks that gigantic growth and acromegaly can exist in the same individual. Twenty per cent. of the patients with acromegaly show evidences of gigantism, and forty per cent. of giants have acromegaly. Gigantic development predisposes to vegetative disturbances, and especially to acromegaly. Enlargement of the thymus, he thinks, is a part of the natural history of acromegaly. Thyroid feeding was productive of slight amelioration of the symptoms of the disease in one case in which it had been employed.

REVIEWS AND NOTICES.

THE THEORY AND PRACTICE OF MEDICINE. By *Frederick T. Roberts, M.D., B.Sc., F.R.C.P., Professor of Materia Medica, Therapeutics and Clinical Medicine, University College, London.* (Publisher, H. K. Lewis, 136, Gower Street, London, W. C.) Price 21s.

This well-known volume has reached its ninth edition, and may well be considered, not alone from its size—for it consists of over a thousand pages—but from its standard of excellence as a text-book, the *magnum opus* of British scientific medicine. The recent influx into India of many valuable American text-books has displaced some of our less known practical English authors. The re-appearance of ROBERTS' MEDICINE in its present well-arranged, well printed, and well-bound form, at the moderate price of 21 shillings, will bring it into great demand among practitioners and students in India and Burma. As a guide to the busy practitioner, as a work of reference to the medical scientist and as a text-book to the medical student, it will be found an inestimable boon, for which the profession at large is much indebted to its talented author and publisher.

PARKE DAVIS & CO'S PREPARATIONS.—We have received from time to time various pharmaceutical samples from this well-known firm, but we have been slow to recommend them without a protracted trial, as in the tropics drugs and their compounds undergo the most damaging deterioration during the excessive heat of summer and the excessive damp of the monsoon weather. We would now invite special attention to the perfection and practical utility of their elegant **HYPODERMIC TABLETS**, as also to the very excellent **TABLETS OF TRITURATES** for the purpose of preparing tinctures and various drug solutions. Practitioners in India would be largely profited by introducing PARKE, DAVIS & CO'S preparations into their practice in this country, as not only are they perfect and elegant, so far as artistic pharmacy can make drugs, but they are absolutely reliable in their physiological action.

Government Medical Gazettes.

GOVERNMENT OF INDIA.

H. E. the Viceroy is pleased to confer the title of Khan Bahadur as a personal distinction upon Muhammad Hussain, Senr. Hosp. Asst., S. M. D., Beng.

The Viceroy is pleased to confer the title of Rao Bahadur as a personal distinction upon Trichinopoly Venkatawami Nilamagan Pillai, Senr. Hosp. Asst., Madras Sappers and Miners; and Camalapuram Luttmiah Nayudu, Senr. Hosp. Asst., 2nd Madras Lancers.

The Viceroy is pleased to confer the title of Rai Bahadur as a personal distinction upon Lala Balha Kishan, Asst. Surgn. in Punjab.

The services of Surgn.-Capt. C. Duer, M.B., F.R.C.S., I. M. S. (Beng.), are replaced at the disposal of the Milly. Dept., from the date he was relieved of his duties at Dhulri.

Surgn.-Capt. G. B. French, 8th Beng. Infy., leave (p. a.) for four days.

Brig-Surgn. Lieut.-Col. William Roe Hooper, Civil Surgn. and Supt. Lunatic Asylum, Lucknow, is permitted to retire from the service, 15th Jan., 1895.

Brig-Surgn. Lieut.-Col. J. C. G. Carmichael, M.D., 3rd Gurkha (Mik) Regt., leave (p. a.) for eight months.

Hosp. Asst. Shamsuddin Khan, attached to the Staff Dispy., Simla, is granted three months' priv. leave, 25th Dec.

BENGAL GOVERNMENT.

Surgn.-Maj. J. French Muller made over Bandwan Jail to Surgn. Lieut.-Col. C. J. W. Meadows, 15th Dec.

Surgn. Lieut.-Col. Kali Pada Gupta, Civil Surgn. of Backergunge, leave for two months and twenty-five days, 8th Jan., 1895, and Surgn.-Capt. J. G. Jordan, on return from leave, to act as Civil Surgn. of Backergunge.

Surgn.-Capt. G. Jameson made over Rampur Boalia Central Jail to Surgn.-Maj. J. French-Mullen, 31st Dec.

Asst. Surgn. Apurba Krishna Choudhuri having passed the prescribed exam. is promoted to the 1st grade, 1st Nov.

Asst. Surgn. Nobin Chunder Dutt, of the Darbhanga Raj Hosp., leave for two months.

Asst. Surgn. Ldit Mohan Laha to have tempy. charge of the Raj Hosp. at Darbhanga, vice Asst. Surgn. Nobin Chunder Dutt.

Asst. Surgn. Kali Nath Banerjee to do superny. duty at the Med. Coll. Hosp., Calcutta, 15th Dec.

Asst. Surgn. Baroda Kanta Roy did the duties of Milly. Asst. Surgn. C. R. Bancroft at the Presy. Genl. Hosp., from 10th to 22nd Oct.

Asst. Surgn. Benode Behary Ghose to have tempy. charge of the Baidyanj sub-divn. and dispy., Buriwan Dist., vice Asst. Surgn. Broja Nath Shaha.

Asst. Surgn. Kasi Nath Ghosh to have tempy. charge of the sub-divn. and dispy. at Singur, vice Asst. Surgn. Gopal Chandra Dey allowed furlough for one year, 22nd Dec.

Asst. Surgn. Banamali Roy did superny. duty at the Chittagong Dispy. from 22nd March to 18th April, and from 4th to 18th May.

PUNJAB GOVERNMENT.

Surgn.-Capt. C. H. Bedford assumed charge of the civil med. duties of Kurram, 7th Dec., relieving Surgn.-Lieut. P. B. Haig.

Surgn.-Lieut. C. B. Prall assumed charge of the civil med. duties of Bannu, 10th Dec., relieving Surgn.-Capt. M. Fooks.

Asst. Surgn. Abunashi Ram, in charge of the Karnal Dispy., assumed charge of the civil med. duties of Karnal, in addition to his own, 8th Dec., relieving Asst. Surgn. W. Marchant, who assumed charge of the civil med. duties of Shahpur, 18th Dec., relieving Dr. J. A. Fluk.

Hosp. Asst. Imam-ud-din from Western Jumna Canal Dispy. Safidon, to the Paudri Canal Dispy. 29th Nov. vice Hosp. Asst. Uttam Chaul transferred to the Safidon Canal Dispy.

Hosp. Asst. Amir Baksh, City (old) Dispy., Amritsar, three months' priv. leave, and was relieved on the 18th Dec. by Hosp. Asst. Sawan Mal, transferred from Chenab Canal Dispy., Gujranwala Dist.

Hosp. Asst. Loharia Ram, on genl. duty at the Mayo Hosp., Lahore, to the Ferozepore Dispy., 18th Dec.

Asst. Surgn. Radha Kishan resumed charge of the Gurdaspur Dispy. on the 29th Nov., relieving Asst. Surgn. Fazl-ud-din.

Hosp. Asst. Yusuf Ali, at present in charge of the Para Chinara Dispy., Kurram, having passed the prescribed exam. in Pushtu, is entitled to an extra allowance of Rs. 5 per mensem from the 8th Dec. and as long as he is employed in Pushtu-speaking tracts.

Asst. Surgn. Ram Narain (I), Asst. to the Civil Surgn. Delhi, two months' priv. leave, and was relieved on the 18th Dec. by Asst. Surgn. Meher Chand (I), transferred from Lahore.

Hosp. Asst. Mutehab Khan, on genl. duty, Rawalpindi Civil Hosp. to the Fatahjang Dispy., 16th Dec. vice Hosp. Asst. Govenindan Das, transferred to the Gujra Khana Dispy., 17th Dec., vice Hosp. Asst. Moha Ram, transferred to the Rawalpindi Civil Hosp. for genl. duty.

Asst. Surgn. Jogendro Nath Biswas, Offg. Depy. Med. Offr. Lahore Central Jail, to the Chakwal Dispy., Jhelum Dist., 10th Nov.

Asst. Surgn. Guran Ditta Mal, Asst. Chemical Examr, Panjab, and Lecturer on Mikewery to Hindustani Class, Med. School, Lahore, one month's priv. leave, 17th Dec.

Asst. Surgn. Jhangli Ram to do genl. duty at Battala, Gurdaspur Dist., 24th Nov.

Hosp. Asst. Ghulam Rasool, on genl. duty at Battala, Gurdaspur Dist., to the Mardian Dispy., Pathwar Dist., 1st Dec., relieving Hosp. Asst. Jawala Shah, placed on special duty with Balraj Delimitation Commission.

First Class Hosp. Asst. Maha Narain having passed the English Qualification Exam., is entitled to the higher rate of pay of his grade from the 10th Dec.

On being relieved at the Mong Dispy., Gujrat Dist., Hosp. Asst. Khair-ud-din was transferred to Dera Ghazi Khan Police Hosp., 30th Nov., relieving Hosp. Asst. Moti Singh, retired.

Surgn.-Capt. H. Fooks made over Bannu Jail to Surgn.-Lieut. C. B. Prall, 10th Dec.

Surgn.-Maj. C. J. Bamber made over Rawalpindi Jail, 20th Dec.

Surgn.-Maj. L. T. Young made over Umballa Jail to Asst. Surgn. Khazan Chand, 24th Dec.

Hosp. Asst. Ghulam Kasul was, on being relieved from suspension, transferred from Karnal to Bhatala, Gurdaspur Dist., for fever duty, 11th Oct. to 24th Nov.

Student Khuda Baksh of the Lahore Med. School, having passed his final exam., is admitted into the service as a Hosp. Asst. of the 3rd class, 21st Dec., and apptd. to genl. duty at the Mayo Hosp., Lahore.

Asst. Surgn. Sodhi Karm Singh, on being relieved of charge of Egerton Hosp., Peshawar, was transferred to the Gujranwala Dispy., 30th Dec.

Asst. Surgn. Farma Nand, Gujranwala Dispy., one month and five days' priv. leave, 29th Dec.

Hosp. Asst. Chajmal Das, having been relieved from suspension at Dera Ghazi Khan, was transferred to the Chenab Canal Dispy. at Killa Ram Kaur, Gujranwala Dist., 8th Dec., relieving Hosp. Asst. Sawan Mal.

Hosp. Asst. Sant Singh, doing genl. duty at Ludhiana, to the Burka Kalan Dispy., Jullundur Dist., 25th Dec., relieving Hosp. Asst. Ram Jas, apptd. to genl. duty at Jullundur.

Hosp. Asst. Umar Khan resumed charge of the Teri Dispy., Kohat Dist., 22nd Dec., relieving Hosp. Asst. Chirag-ud-din.

Asst. Surgn. Fazl-ud-din, doing genl. duty at the Mayo Hosp., Lahore, to the Egerton Hosp., Peshawar, 24th Dec., relieving Asst. Surgn. Sodhi Karm Singh.

Hosp. Asst. Nawab Khan resumed charge of the Gomal Pass Dispy., Dera Ismail Khan Dist., 21st Dec., relieving Hosp. Asst. Dasrundi Khan, apptd. to the Kulachi Dispy., Dera Ismail Khan Dist., 24th Dec., *vice* Hosp. Asst. Alam Shah, granted three months' priv. leave.

Asst. Surgn. B. Phillips, doing genl. duty at Rawalpindi, to the Dandot Colliery Dispy., N.-W. Ry., 15th Dec., relieving Asst. Surgn. Dewan Ali.

Asst. Surgn. Diwan Ali, Dandot Colliery Dispy., N.-W. Ry., to the Pindigheb Dispy., Rawalpindi Dist., 22nd Dec., relieving Asst. Surgn. Daljant Singh Khanka, whose services have been placed at the disposal of the Foreign Dept. for employment in the Jeypore State.

Hosp. Asst. Amir Khan, doing genl. duty at the Mayo Hosp., Lahore, to the Karnal Dispy., 25th Dec., for genl. duty.

MADRAS GOVERNMENT.

Brig.-Surgn. Lieut.-Col. J. North, I. M. S., 1st Madras Lancers, leave for one year.

Surgn.-Lieut. E. H. Sharman, I. M. S. (Madras) to be Offg. Med. Offr., 6th Infantry, H. C., *vice* Surgn.-Lieut. G. Bidle, on furlough.

Surgn.-Capt. C. A. Johnston, I. M. S. (Madras) to be Offg. Med. Offr. 1st Lancers H. C., during the absence of Surgn.-Major. C. Mallins, M.D., apptd. to offg. as Depy. San'y. Commr., Madras, 6th Dec.

Brig.-Surgn. Lieut.-Col. J. F. Sargent, I. M. S. (Madras) Med. Offr. 2nd Lancers, to be Med. Offr. 4th Lancers, H. C., *vice* Surgn.-Major. G. J. Kellie, who exchanges, 1st Dec.

Surgn.-Capt. E. H. Wright, I. M. S. (Madras) to be Offg. Med. Offr. 3rd Infantry, H. C., *vice* Surgn.-Maj. H. G. L. Wortabet, M.D., on furlough, 9th Nov.

BOMBAY GOVERNMENT.

Transfers of Hosp. Assts.—Udhev Deoji Powar, from fair duty, Alandi to genl. duty, Poona, 29th Nov.

Shivaji Paudu Jadav, from genl. duty, Godhra, to Hialol Dispy., 19th Nov.

Balkrishna Pandurang, from genl. duty, Godhra, to Bombay, 25th Nov.

Ebrahimkhan, from genl. duty, Aden, to Bombay, 3rd Dec.

Gunesh Vinayek, from Bhadgaon to Khanspur Dispy., 27th Nov., *vice* Narayan Vithal, transferred.

Chhaganlal Atmaram, from genl. duty, Kaira, to Nadiad Dispy., *vice* Ramsing, transferred to Dohad Dispy., 27th Nov., *vice* Asst. Surgn. D. E. Kothavala transferred.

Maneklal Harjivan Vyas, from genl. duty, Godhra to Kapadvanj Dispy., 3rd Dec., *vice* Abraham Shalum, transferred.

Wadilal Kesharilal, from genl. duty, Patana, to Patan Dispy., 27th Nov., *vice* Mohanlal Nanakram, on leave for three months.

Manikum Subrayam, from Civil Hosp., Bijapur, to Supa Dispy., 30th Nov., *vice* Dattatraya Gunesh, transferred.

Baberbhai Chhotabhai, from genl. duty, Ahmedabad, to Rajkot, 25th Nov.

Govind Balkrishna, from genl. duty, Poona, to Ratnagiri, 22nd Nov.

Mukund Sudashtiva, from genl. duty, Ahmedabad, to Surat, 25th Nov.

Krishnaji Dattatraya, from genl. duty, Poona, to Belgaum, 20th Nov.

Kasalnath Hari, from genl. duty, Poona, to Thana, 19th Nov.

Pandharinath Bhawrao, from genl. duty, Poona, to Dhulni, 18th Nov.

Yeshwant Balkrishna, from genl. duty, Poona, to Thana, 17th Nov.

Wasulver Gungalher, from genl. duty, Poona, to Belgaum, 21st Nov.

Parbhuram Tuljaram, from genl. duty, Ahmedabad, to Surat, 25th Nov.

Ramchandra Narasingh, from genl. duty, Poona, to Nasik, 22nd Nov.

Bhugvandas Jivanram, from genl. duty, Ahmedabad, to Rajkot, 25th Nov.

Bhimaji Krishna, from genl. duty, Poona, to Dharwar, 22nd Nov.

Yeshwant Galmooji, from genl. duty, Poona, to Nasik, 21st Nov.

Krishnaji Ramchander, from genl. duty, Poona, to Dharwar, 24th Nov.

Pranshanker Khushalrai, from genl. duty, Ahmedabad, to Kaira, 26th Nov.

Abdul Latif, from genl. duty, Poona, to Karwar, 21st Nov.

Reuben Sudkell, from N.-W. Ry. Hosp. to Kotri, Umartkot-Fachbadra Ry. survey, 1st Nov.

Hiranand Nanumal, from genl. duty, Shikarpur, to Mehar Dispy., 14th Nov., *vice* Khushaldas Khemchand, transferred to Kotri-Rohri Railway Survey.

Chubermal Santiasa, from Civil Hosp., Hyderabad, to Schwan Dispy., 13th Nov., *vice* Tukaram Pandernath, transferred to Kotri-Rohri Ry. Survey.

Mulchand Jhematmal, from genl. duty, Hyderabad, to N.-W. Ry. Hosp., Kotri, 16th Nov.

Kundanmal Karamchand, from genl. duty, Hyderabad, to Hyderabad-Umartkot State Ry., 16th Nov.

Baharsing Toursing, from genl. duty, Hyderabad, to Karachi, 17th Nov.

Pessumal Wadhmal, from genl. duty, Hyderabad, to Jacobabad, 16th Nov.

The undermentioned Asst. Surgns., I.S.M.D., 2nd grade, passed the exam. qualifying them for promotion to 1st grade:—Daniel William Adolphus Gillespie, William Henry Cabral, John Greahy, William Frederick Barnett, Albino Graciano Alphonso, Joseph Alexander Cordeiro, Mathew Lewis Cabral, and Louis Xavier DeSilva, 15th Oct.

The undermentioned Milly. pupils have qualified themselves for the grade of Asst. Surgns., I.S.M.D., 3rd class, at the Grant Med. Coll. for the Bengal Presidency, and are transferred to that Presidency:—John Vincent James, James William Lawrence, Reginald Henry Willick Hart, William George St. John Hussey, Walter Arthur Clifford Netscher Thomas Henderson Brooks, Charles Mullins, Donald Day Stewart, Charles Samuel Anthony Reginald Brown, Ronald Mackinnon, Henry Osmond Bazely, William Fitzallan Parrott, Charles Wiltshire Maine, and Hugh Norman Stewart.

The undermentioned Hosp. Assts passed the exam. qualifying them for promotion:—2nd grade Solomon Ezekial, Ittoo Chowan, Luxumun Khundoji, Rahmin Shalomji, Ramji Khundoji Kudum, Luxminarayen Jethabhoy, Hamidoolah Azimtoolah, Shivrani Naidoo, Shaik Ali Shabash, Ballaram Lingoo, Ramchandra Vasudera, Gunesh Sudashtiva, Dasayyah Vithoo, Vithu Bapu Sawant, Succoram Babaji:—3rd grade, Bhawoo Bajirao, Ramchander Govind, Mahadeo Luxuman; Civil Branch, 2nd class, Keshow Govind, Chaturji Narayan, Nasarwanji Pantonji.

Surgn.-Maj. R. W. S. Lyons, M.D., to act as Prof'r. of Medicine and Clinical Medicine and Therapeutics, Grant Med. Coll., *vice* Surgn.-Maj. R. Manser, M.D.

Surgn.-Lieut.-Col. Patrick Murphy, M.D., I. M. S., is permitted to retire from the service, 17th Jan'y, 1893.

Asst. Surgn. J. E. White is permitted to resign the service at his own request.

Asst. Surgn. Navroji Kavaji Kalyanvala, L.M. & S., priv. leave for two months, 29th Nov.

Asst. Surgn. B. E. Ghaswalla, L.M. & S., 1st Asst. Chemical Analyst to Govt., has been apptd. as a temp. measure, to act as Demonstrator of Anatomy in the Grant Med. Coll., in addition to his own duties, from 8th Dec., *vice* Asst. Surgn. N. K. Kallianwalla, L.M. & S.

Miss A. M. Benson, M.D., apptd. to be 1st Physician, Pestanj Hormasji Kama Hosp. for women and children, took charge on 12th Nov.

CENTRAL PROVINCES GOVERNMENT.

Civil Hosp. Asst. Syed Sallar, doing duty under orders of the Civil Surgn., Raipur, is apptd. to the Jail and Police Hosp., Chhindwara, *vice* Civil Hosp. Asst. Bashiruddin, apptd. to the Deori Branch Dispy., Sangor Dist., *vice* Civil Hosp. Asst. Pratapsing, directed to duty under orders of the Civil Surgn., Sambalpur.

Two months' sick leave is granted to Civil Hosp. Asst. Ram Sahai in extension.

Civil Hosp. Asst. Chunder Bhan, of the Jail and Police Hosp., Narsinghpur, is posted to the Banda Branch Dispy., Sangor Dist., *vice* Civil Hosp. Asst. Ram Lal posted to the Behli Branch Dispy., *vice* Civil Hosp. Asst. Saadut Hussain, posted to the Jail and Police Hosp., Narsinghpur.

Asst. Surgn. Omesh Chander Mitter resumed charge of his duties at the Omaria Colliery on the 17th Dec.

On being relieved by Asst. Surgn. Omesh Chunder Mitter, Asst. Surgn. Gopal Chander Ghose, to act as Sany. Inspr. in the Ohhattagurh Divn.

Relieved by Civil Hosp. Asst. Kunj Behari Lal on return from leave, Civil Hosp. Asst. Sitaram Roupchand, temply. attached to the Harda Branch Dispy., Hoshangabad Dist., is apptd. to the Sohagpur Branch Dispy., Hoshangabad Dist., *vice* Hosp. Asst. Balaji Baliram, apptd. to the Jail and Police Hosp., Hoshangabad.

Three months' priv. leave is granted to Civil Hosp. Asst. Syed Gulam Nabl. of the Central Jail Hosp., Raipur.

Civil Hosp. Asst. Gunga Pershad Singh, going duty under orders of the Civil Surgn., Bilaspur, is temply. posted to the Central Jail Hosp., Raipur, *vice* Civil Hosp. Asst. Syed Gulam Nabl.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Maj. J. Sykes, Civil Surgn., Mussoorie, priv. leave for one month, 15th Jan. 1895.

Asst. Surgn. Mul Raj, of the Salar Dispy., Fyzabad, furlough for two years, 1st Feby. 1895.

Surgn.-Maj. C. Seymour, Station Hosp., Landour, to the civil med. charge of Mussoorie, in addition to his milly. duties, *vice* Surgn.-Maj. J. Sykes.

Surgn.-Capt. S. H. Henderson, Offg. Supdt., Allahabad, on being relieved by Surgn. Lieut.-Col. G. C. Hall, to office, as Civil Surgn., Fatehpur.

Surgn.-Lieut. A. O. Hubbard, I. M. S., to the civil med. charge of Almora, in addition to his milly. duties, 13th Dec.

Dalip Singh, a passed student of the Lahore Med. Coll., is apptd. to the Civil Med. Dept. of these Provinces as a 3rd grade Asst. Surgn., 28th Dec., and placed on reserve duty at Lucknow.

Asst. Surgn. Trishita Nath Singha, on reserve duty at Jhansi, to the charge of the Lalitpur Dispy., Jhansi Dist., *vice* Asst. Surgn. Ram Charan, granted priv. leave.

Surgn. Lieut.-Col. G. C. Hall, Suplt., Central Prison, on return from furlough, to the charge of the Central Prison, Allahabad.

BURMA GOVERNMENT.

Surgn.-Maj. R. E. S. Davis, M.B., made over and Surgn.-Capt. R. H. Castor, M.B., assumed, charge of the duties of the Secy. to the Inspr.-Genl. of Jails, Burma, 18th Dec.

Dr. H. J. Augustine made over, and Asst. Surgn. Thomas Kiddle assumed, charge of the Civil Surgency., Myitkyina, 4th Dec.

Surgn.-Capt. T. W. Stewart made over, and Surgn.-Capt. C. W. Johnson assumed, charge of the Civil Surgency. of the Meiktila Dist., 12th Dec.

Hosp. Asst. Rama Chandra Succaram Deshmookha left Civil Hosp., Pymmana, and assumed charge of the Ry. Dispy., Yamethin, 9th Dec.

Hosp. Asst. Nurdyan assumed, as an additional duty, charge of the Civil Dispy., Letpadan, Tharrawaddy Dist., 14th Dec. *vice* Hosp. Asst. Ashutosh Basu.

Hosp. Asst. Ram Lal, on leave for three months, left Civil Dispy., Kyauktan, Pegu Dist., 12th Nov.

Hosp. Asst. Sandhe Khan left Police Hosp., Bhamo, and assumed medical charge of the No. 1 South-Eastern Escort, Bhamo, 1st Dec.

Hosp. Asst. Muhammad Zaman Khan left Police Hosp., Mogok, and assumed charge of the Civil Hosp., Mogok, Ruby Mines Dist., 6th Dec.

Hosp. Asst. Krishna Hurry, left genl. Hosp. and assumed charge of the Civil Dispy., Maymyo, Mandalay Dist., 7th Dec.

Hosp. Asst. Riazuddin left Outpost Hosp., N'krong and assumed charge of the Outpost Hosp., Sima, Myitkyina Dist., 19th Nov.

Hosp. Asst. Uma Chunder Chuckerbutty left Police Hosp., Bhamo, and assumed medical charge of the No. 3 Koukwa Escort, Bhamo, 30th Nov.

Hosp. Asst. Mahomed Sheriff, on return from leave, assumed charge of the Police Hosp., Mogok, Ruby Mines Dist., 5th Dec.

Surgn.-Capt. R. H. Castor made over, and Surgn.-Capt. T. W. Stewart assumed, executive and med. charge of the Yamethin Dist. Jail, 15th Dec.

Surgn.-Capt. R. H. Castor made over, and Surgn.-Capt. T. W. Stewart assumed, charge of the Civil Surgency., Yamethin Dist., 15th Dec.

Asst. Surgn. F. Bradley made over, and Mr. H. E. Wells, M.B., C.M., assumed, charge of the Civil Surgency., Ruby Mines Dist., 15th Dec.

Hosp. Asst. D. de Souza assumed charge of the Police Hosp., Bhamo, on special escort duty, 21st Nov.

Hosp. Asst. D. de Souza left Police Hosp., Bhamo, and assumed med. charge of the No. 4 North-Eastern escort, Bhamo, 12th Dec.

Hosp. Asst. Syed Abdul Khader assumed charge of the Police Hosp., Bhamo, 29th Nov.

Hosp. Asst. Radha Nath Singh assumed charge of the Outpost Hosp., Pinka, Mogaung Sub-divn., 18th Nov.

Hosp. Asst. Bistoo Charu Das left Police Hosp., Mogok, and assumed charge of the Civil Hosp., Mogok, Ruby Mines Dist., 23rd Oct.

Hosp. Asst. Bistoo Charu Das having passed an exam. in English on the 7th Dec., is entitled to the allowance for the same.

Hosp. Asst. Abdul Wahid assumed charge of the Police Hosp., Mogaung, 21st Dec.

Hosp. Asst. Rajchunder Kur assumed charge of the Civil Hosp., Kindat, Upper Chindwin Dist., 2nd Dec.

ASSAM GOVERNMENT.

Privilege leave for two months is granted to Hosp. Asst. Ram Lochan Das, in charge of the Lakhimpur Dispy., Goalpara Dist., 19th Dec.

Hosp. Asst. Mahim Chandrn Datta, in tempy. charge of the Krishnai Dispy., Goalpara Dist., is apptd. to the charge of the Lakhimpur Dispy., in that dist., *vice* Hosp. Asst. Ram Lochan Das, 19th Dec.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Rs. 1 for subscribers and Rs. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

GIBBONS.—On 7th Jan. 1895, at Sealdah House, the wife of Surgn.-Maj. J. B. Gibbons, of a daughter.

MANN.—On 'Xmas Day, 1894, at Lucknow, the wife of Asst. Surgn. H. V. Mann, of a son (premature).

DEATHS.

ATKINS.—On 2nd Jan., 1895, at Fatehpore, of abscess of the liver, Charles J. Atkins, Civil Surgn., aged 47 years. (Deeply regretted).

EDGE.—On 5th Jan., at 18, Staveley Road, Poona, George, infant son of Surgeon Lieutenant-Colonel and Mrs. Edge, aged 4 days.

NOTICES TO CORRESPONDENTS.

R. P. B. (Pachbadra).—Dr. Elliott's article has been sent us for publication, and will appear in our next issue. You will then have an opportunity of reading his views. The viper heads sent will be forwarded to London as you request.

W. H. B. (Allahabad).—Many thanks for the report. It will appear in our next number.

Jurula Parahad (Lahore).—We have received the pamphlet, and thank you much for it.

W. H. H. (Madras).—Retired Warrant Medical Officers, according to the order of Government, may use the title of the new Warrant if they apply to Government to be placed on the Reserve List for active service. All Warrant Medical Officers are *qualified* practitioners, and are entitled to grant medical certificates.

Hopeless.—Kindly quote the Government of India Order in full, disallowing a free pass to an attendant on a sick hospital assistant.

J. N. G., D. M., J. P., R. A.—Many thanks for your papers. They will find early insertion.

J. M. (Bombay).—We are not aware of the identity. Many thanks for your trouble.

S. A. (Fatehpur).—You do not say whether you would wish your son to enter as a Civil or as a Military medical pupil. The fullest information is to be found in "The Medical Register and Directory of the Indian Empire," obtainable from the Manager of this office.

T. A. (Madag).—Your paper is not yet received.

J. R. H. (Lucknow).—You are admissible to the Association.

Congress Contributors.—We sincerely thank the many Congress contributors who have very kindly sent us their contributions for publication in the *Record*.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjina Tibabat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Sculpel—Indian Journal of Pharmacy.

Gazettes of the Governments of India, N.-W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Haugan's Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Plasterer's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine—Medical Missions.

Books.—*The Theory and Practice of Medicine.* By Frederick T. Roberts, M.D., B.Sc., F.R.C.P.

The Annual of the Universal Medical Sciences for 1894. By Charles E. Sajous, M.D.

Physiology of the Carbo-hydrates. By F. W. Pavy, M.D.

Falita-Rasayana. By Chuni Lal Bose, M.B., F.R.C.S.

Enlargement of the Prostate: its treatment and medical cure. By C. W. Mansell Moullin, M.D.

The Dyspepsia of Phthisis. By W. Soltan Fenwick, M.D., B.S., Lond.

Methods of operating for Cataract. By Surgn.-Capt. G. H. Fink, I. M. S.

Literary Contributions and Letters from: Rai Bahadur Kanny Lal Dey, C.I.E., F.R.S., G.M.C.B., Calcutta; Surgn.-Maj. A. Adams, M.D., I. M. S., Rajputana; Henry Gallay, M.D., Chandernagore; Asst. Surgn. Ed. Lerede Chalke, M.D., C.M., L.F.P.S. Glas., Berhampur; E. W. Chambers, L.M.S. (Cal.) L.S.A. (Lond.), Calcutta; Surgn.-Capt. Geo. S. Thomson, M.B., C.M., I. M. S., Deesa; Dr. K. N. Bahadurji, M.D., (Lond.) Bombay; Hara Kali Sen, V.L.M.S., Raiganj; W. J. Simpson, M.D., Calcutta; W. M. Haffkins, Calcutta; W. R. Kynsey, C.M.G., F.R.C.P., Ceylon; Surgn. Lieut.-Col. J. Duke, I. M. S., Bhopawar; Geo. Watt, M.B., C.M., C.I.E., Calcutta; Surgn. Lieut.-Col. W. G. King, M.B., D.R.H., Madras; Brig.-Surgn. Lieut.-Col. T. H. Hendley, C.I.E., Jeypur; Surgn.-Capt. Harold Hendley, D.R.H., I. M. S. Jeypore; Surgn.-Lieut. R. H. Elliott, M.B., B.S. (Lond.), F.R.C.S. (Eng.), Madras; Jogendra Nath Ghose, L.M.S., Calcutta; L. Fernandez, M.D., Calcutta; H. D. Pant, L.M.S., Gonda; Asst. Surgn. A. Nolas, Burma; J. Palpu, L.M.S., Mysore; D. Morison, M.D., Rampur Boalia; Surgn.-Capt. J. F. Evans, M.B., Calcutta; Surgn. Lieut.-Col. Edward Lawrie, M.D., Hyderabad; John Morton, M.D., Mussoorie; T. N. Mozumdar, L.M.S., Bankipur; P. R. Hay Jagannadham, B.A., M.B., C.M. (Edin.), Khulna; A. Ewbank, F.R.S., Patna; Surgn.-Major H. P. Dinmook, I. M. S., Bombay; R. Atmaran, C.M.C., Hingoli; C. Forbes, M.D., London; Okhoy Kumar Chatterjee, L.M.S., Gwalior; Surgn.-Major J. Maitland, M.D., Madras; Rai Bahadur Kailas Chunder Bose, L.M.S., Calcutta; Kedar Nath Das, M.B., Calcutta; Surgn.-Capt. P. Hehir, M.D., F.R.S., Hyderabad; Surgn.-Capt. W. P. O'Gorman, Midnapur; and others.

EPIDEMIC OF ICTERUS.

KRAMER observed an epidemic of icterus in a small town in Denmark, forty-two cases occurring within two months, generally affecting children between 5 and 6 years of age. Many other cases escaped medical observation. The disease was characterised by jaundice, great prostration, enlargement of the liver, and pain in the hepatic region. Convalescence was somewhat slow, but no deaths or complications occurred. The origin of the epidemic was unknown.

Original Articles.

IS STRYCHNINE AN ANTIDOTE TO COBRA POISON.

By SURGN.-LIEUT. R. H. ELLIOT, M.B., B.S., Lond.,
F.R.C.S., Eng., D.P.H., Camb. I. M. S.

We are familiar with the statement that history repeats itself, and perhaps in few branches of science is this adage so well illustrated as it is in the past and present of snake poisoning. One vaunted cure after another has come before the profession and the public only to spend its short day and then bubble-like to burst, leaving no trace behind it on the world of science.

I have been asked why I have not been content to stand aside and watch the fate of this strychnine remedy, secure in the knowledge that if it be a bubble, bubble-like it must burst, while if it be all that has been claimed for it, it must and will remain a most enduring beacon founded on a bed-rock of solid fact to throw light through all time over the troubled face of the ever-changing sea of medical opinion.

Were I confident that the new remedy would run its course doing only good, or even doing more good than harm, I would gladly stand aside, but neither you nor I can blind ourselves to the fact that this line of treatment is fraught with the gravest danger to the lives of men, women and children. Already we have on record cases which suggest the very worst possibilities, and those too in *Thanatophidia*-bitten patients, but what of the great army of the scorpion-stung, the rat-bitten, the thorn-pricked, and others, who coming under treatment in a state of collapse, the result of fear, may be subjected to the agonies, if not the death of strychnisation, by an over-zealous and well-meaning practitioner.

Nay, more should it fall to the lot of any of us to render agonised the closing moments of some valued and valuable life, should we soon forgive ourselves, and even if we did so, would the patient's friends be equally lenient? I think not.

It seems hardly necessary to remind such an audience as I have the privilege of addressing to-day of the past history of the strychnine treatment of snake-bite.

Australia, which 25 years ago in the person of Dr. HALFORD pressed on us the acceptance of the ammonia cure, and which indignantly received our critical rejection of Dr. HALFORD's treatment, Australia I say to-day has left the ammonia cure behind and as confidently as ever presses on us a snake-bite-cure, but now a new one, namely, strychnine. I do not pretend to say that strychnine and ammonia are not antidotal to the bites of Australian snakes, though I must say that the evidence is to my mind far from convincing, but I will bear you all with me when I say that we in Madras at least have been far from satisfied with the reported cures that have, from time to time, been published in the Indian papers.

Two cases were brought up before our Branch of the British Medical Association some months ago, and the suggestion was then thrown out that if only we could

carry out some experiments on animals, much might be done to clear up our doubts and to place the matter on a more satisfactory basis. With an excellent zoological laboratory and trained assistants at my disposal, the opportunity to do something was too tempting to be resisted, and the work that I put before you to-day has been the outcome of the suggestion I referred to.

The object that I had before me was to ascertain the value of strychnine as an antidote for snake poisoning, and two courses seemed to me to be open to the worker in this field.

The first was to experiment on the lower animals.

The second was to experiment on man.

To the latter procedure we may apply the more euphemistic term clinical observation. It must be remembered, however, that the grounds on which our action is based are theoretical, so far as Indian snakes are concerned, that strychnine is a dangerous drug, and that it is often very difficult to determine whether any case is one of *Thanatophidia* bite or not.

Bearing such important considerations in mind we cannot, I think, refuse to accept the term *experiment* for the Strychnine treatment of man.

Surely at the outset of such an enquiry as the one before us, the more justifiable course to pursue is to experiment on animals. Should the answer to these experiments be a favorable one, we may boldly proceed to try our remedy on man.

I propose to give you first the results of my experiments on the cobra poisoned animals, and later to analyse and discuss the reported cases of the strychnine treatment of snake-bite in man.

I am well aware that Dr. MUELLER has objected to receive any conclusion drawn from experiments on animals.

Before dealing with his objection, let me point your attention to his letter, dated 28th June 1890, in which in writing to the Chief Secretary of Victoria, he quotes certain experiments on animals in Russia which had proved favorable to his conclusions. These experiments he there brings forward as a strong argument in favor of his theory, and yet when subsequent work points the other way, Dr. MUELLER declines to own it.

His objections are based on two grounds:—

(1) That the experiments previously conducted were carried out on dogs, and that one could not argue direct from one class of vertebrates to another, even though both were mammals; and

(2) That between the nervous system of man and the lower animals there is 'only a functional analogy which has been mistaken for a complete identity.'

I quote from the *Indian Medical Record* of 16th September 1892, which contains a very friendly criticism on Dr. MUELLER's account of '86 years' work on snake poison.

Before entering on my own methods, allow me very briefly to discuss these objections.

The first of them had occurred to me at the very outset of my work, and I therefore determined not to limit myself to one or even to two or three sets of vertebrate animals, but to choose common animals which would as

thoroughly as possible represent the vertebrate kingdom, and especially the mammalia.

With this end in view the following animals were selected:—Frogs, lizards, ducks, fowls, hares, monkeys, pigs, dogs, goats, guinea-pigs.

Any one possessing even the most superficial knowledge of comparative anatomy must admit that the above list is very fairly representative of the vertebrate kingdom, and especially of the mammalia.

I argued and I think no one will dispute my contention, that if experiments on these various animals gave one and the same answer, one might fairly believe that man would give the same.

If I am wrong in this conclusion what, may I ask, becomes of our belief in the doctrine of evolution, for if we admit that man and the lower animals have had a common source and that many of these in the list before you possess the closest affinities with ourselves, surely, it is no presumption to believe that influences which affect these animals one and all in the same manner, will affect us similarly under similar circumstances.

Even if you reject the theory of evolution, the facts of comparative anatomy and physiology strongly support the same argument.

Now to deal shortly with the second objection. I for one cannot accept the statement that between man and the lower animals there is merely a functional analogy. By the term 'merely a functional analogy' I understand Dr. MULLER to mean that the nervous systems of man and animals are constructed to perform the same function, and that they have nothing more in common.

No one will contend for a moment that there is absolute identity between the nervous systems of two animals even of the same species, be they man or beast, but I maintain most strongly that not only is there a functional analogy, but that there is an anatomical analogy; a physiological analogy; a pathological analogy; a clinical analogy; a therapeutic analogy, and in that there is every kind of analogy, between the nervous systems of man and the lower vertebrata.

Over the anatomical analogy it would be a waste of time to stay. It is too familiar to us all. As for a therapeutic and a physiological analogy, one would have thought that the researches of BRUNTON and other well-known workers, had long ago removed it from the land of speculation. Is not a great deal of our medicine and pathology to-day based on it?

It may reasonably be asked, however—What evidence is there of this universal analogy between man and the lower vertebrata in their reactions to the two poisons before us? In other words, do we find that cobra poison and strychnine respectively, produce closely similar manifestations throughout the vertebrate kingdom?

In order to answer this let us compare the effects of these poisons on the animals which have been experimented on, with the well-known effects of the same agents on man. They will be found to be practically identical.

A review of the strychnine control experiments recorded, will show that the first symptom of strychnisation is a general brace-up of the nervous system. The

animal in fact is on the *qui vive*, a few moments later and it becomes alarmed while its movements tend to be spasmodic. It seems unable to stand comfortably and gives one the impression that it is walking on hot bricks, suddenly a convulsion, either opisthotonic or emprosthotonic, more commonly the former, throws it down. Clonic and tonic convulsions now alternate, respiratory spasm is severe the embarrassment of the respiratory centre is shown in the general lividity, and further in the very rapid breathing during the intervals of spasm.

The least stimulus, such as a sound or touch, brings on a fit in an animal which, if left alone, might lie quite still. The convulsions are attended with severe pain, and the patient dies usually in respiratory spasm or more rarely exhausted by frequent spasms. Should a fatal issue be averted, the animal rapidly recovers, the convulsive stage passing into a sleepy condition in which the nervous system seems profoundly exhausted, but in which I have never seen an animal die. So much for strychnine in animals. I think you will admit that the picture I have endeavoured to draw from carefully recorded notes on animals would apply equally well to man.

Now as to cobra poison:—

In frogs and lizards the only points noticeable were, that the animal showed signs of malaise, paralysis rapidly supervened, spasms usually occurred, and life was extinguished.

Speaking generally of the mammalia experimented on, one might say that the stages passed through are best represented by the words off-repeated in the notes—Walking, soon sitting down, lying down, dying.

The earliest symptoms noticed are drowsiness and loss of control over the limbs, especially the hind limbs. The animal no longer moves about, and it evidently prefers to be left alone. When disturbed, it soon settles down again. After a short interval the sitting posture is forsaken and soon the patient is found lying helplessly prone, paralysed and dying.

The respiration toward the end is slow but not labored. At this stage the shallow breathing, livid color and general condition of nervous failure suggest to me the patient we have all of us seen at one time or another brought in from a severe railway smash. The all-round nervous exhaustion exhibited in such a case from loss of blood is here repeated as a consequence of general poisoning of the nervous centres. Like the railway patient alluded to, the cobra poisoned animal retains his consciousness almost to the last.

Then comes the end, often ushered in by a little shudder, a clonic spasm of limbs, in no wise comparable with the strychnine convulsion, and the curtain drops.

Salivation was a very common, if not a constant feature of the case in the mammals experimented on. I can only regret that its very commonness led to its escaping notice in the recorded tables. In dogs, goats, pigs and monkeys as well as in the birds, it was a practically unvarying symptom.

An examination of the subcutaneous tissue at the seat of the injection showed an extravasation evidently of an inflammatory nature around the seat of lesion.

In monkeys two additional symptoms were present, and to these I wish especially to direct your attention. In these animals the earliest sign of cobra poison is a drooping of the upper eyelids. This becomes so marked in time that the animal tilts his head back, and rolls his eyes down in order to see out of his pupils. This drooping is evidently paralytic. The remaining symptom is a condition frequently referred to in the notes on monkeys as *drunkenness*. The animal loses its power of co-ordination and staggers about with an extremely drunken giddy look. In one case the monkey seemed to suffer from the optical delusion that a rope was before it. This it tried to reach.

Turn now to WALL's able description of a human being suffering from the results of a snake-bite, and we have an exact repetition of the above story. You will find his account in WALL'S Indian Snake Poison, pp. 2—4 and pp. 10—15. See also RICHARDS' Landmarks of Snake-poison Literature, pp. 134—235, and the Proceedings of the Snake-poison Commission of 1873 and 1874, pp. 36—41.

Most striking are WALL's allusions to the early drooping of the eyelids and to the feeling of drunkenness the patient complained of. He goes on to say that the latter symptom will probably never be elicited in animals on account of their lower intelligence not enabling them to communicate it. *Est humanum errare*, and in this particular WALL has justified the old saying.

Lastly, one may add that an animal suffering from a heavy dose of cobra poison does not necessarily shew the drunken stage, but passes rapidly from drowsiness with drooping eyelids into a rapidly fatal end, attended with shivering convulsion.

These and other points that time forbids us to dwell on will, I think, establish my contention that there is a very close analogy between the various mammalia including man, in their behaviour to the two poisons we are discussing.

With these facts before you, I think I shall carry you with me when I say that this analogy is not merely one of function, but that it embraces symptomatology, pathology and therapeutics, not to speak of anatomy and physiology.

Starting from the basis, that man and the lower mammalia react alike to the two poisons we are considering, let us *1st* investigate the effect of the two poisons when at work together on animals, and *2nd* let us in like manner study the results of the similar experiments on man.

With this end in view, I will now invite your attention to the results of my recent experiments. Of almost all of them, some of you have been witnesses, and you are aware that throughout I have courted the utmost professional publicity and criticism.

That the results so obtained are of value for deductive purposes I think I may now safely assume that you all believe.

Forgive my digressing for one moment to express the regret that one cannot but feel, when one sees well-meaning but alas! mistaken people bitterly opposing all vivisection except that carried out on human beings. Such a position, in my mind, is untenable.

It is necessary at the outset to describe shortly the technique I have employed.

All the experiments have been carried out with the binocellate cobra (*Naja tripudians*); but I hope at a later date to carry out a similar series of experiments with the other poisonous snakes of India.

The cobra was chloroformed in a large glass bottle. It quickly died and was then removed, and the two poison glands dissected out. From these glands the poison was squeezed out and allowed to fall into watch glasses. A number of these glasses were ready before-hand, and each glass was labelled according to the number of drops it contained.

These were put away in batches carefully labelled with the date, &c.

The poison rapidly dries, solid.

When required for use, a small quantity of saline solution is added to the dried poison, and this is then dissolved, drawn up into the syringe and subcutaneously injected in the abdomen.

During my earlier experiments I injected into one thigh, but gave this up in favor of the subcutaneous tissue of the abdomen, as the spurious condition of paralysis produced in the injured thigh was very confusing.

MR. JONES, Professor of Physics at the Madras Presidency College, very kindly weighed for me a number of drops of cobra poison taken at random from those in actual use.

These drops were first allowed to dry. I will read you MR. JONES' report.

"The following are the masses of the substances submitted:—

| | | | | | | |
|-----|--------|---------|---|-------|-------|-------|
| (1) | 0.011 | Grammes | — | 1/4th | Grain | about |
| (2) | 0.009 | " | — | 1/4th | " | " |
| (3) | 0.0097 | " | — | 1/4th | " | " |
| (4) | 0.008 | " | — | 1/4th | " | " |
| (5) | 0.007 | " | — | 1/4th | " | " |
| (6) | 0.007 | " | — | 1/4th | " | " |
| (7) | 0.007 | " | — | 1/4th | " | " |
| (8) | 0.009 | " | — | 1/4th | " | " |

The differences in the masses of the drops may be ascribed to—

- (1) Unsteadiness of the support.
- (2) Unsteadiness in the rate of flow of the liquid out of the gland.
- (3) Alteration in the surface-tension of the liquid, assuming that the gland was held in the same position, and the liquid was that of the same density throughout.

After keeping two of the substances in desiccators for two days, I found very little alteration on weighing again."

In the tables of experiments I have for convenience sake spoken of these drops as minima, though strictly speaking they are not minima. The variation that MR. JONES records may, I think, be fairly neglected in the face of the result of these experiments.

It has been asked why I did not make the snake bite the animals, instead of injecting poison.

Any one who has spent a morning in endeavouring to make a snake strike a single animal will know how dangerous and unsatisfactory such a course is. Apart from the

questions of time and trouble, there is always the uncertainty,

- (1) Whether the snake has really bitten.
- (2) Whether poison has been injected, for the gland may be empty or the strike may not have been a well timed one; and
- (3) Whether in any series of experiments the same amount of poison has been injected in each.

For reliable comparative experiments it is necessary—

Firstly—That one should know

- (a) that poison has been injected; and
- (b) that the same amount has been injected in each.

Secondly—That in each case the poison be similarly injected into equally absorbent parts, equally far from the heart.

Thirdly—that the minimum fatal dose of snake poison be ascertained and given in order that the antidote may have the fullest time and opportunity for any action it may possess.

A point of great value in experiments on animals with a syringe is that we thus avoid the great and error-bringing element of fright and fear of death which operates so strongly on a snake-bitten man.

Having settled the minimum fatal dose of cobra poison and the rapidly fatal dose for each class of animals, I next proceeded to ascertain the full physiological dose of B. P., liquor strychnia solution hypodermically given that could be injected into each class of animals, short of fatal effects.

These preliminaries settled, antidotal experiments were then undertaken. Every device was resorted to in order that the strychnine might have the fullest opportunity of exhibiting its vaunted powers.

That this was done you will see by reference to the table of experiments. In some cases the full physiological dose of strychnine was given as soon as cobra poisoning manifested its symptoms, in others the action of the snake virus was anticipated, in others small sub-physiological doses were repeated till full physiological effects were reached, while in yet others, poisonous doses of liquor strychnia were administered.

I regret to record that in no case did strychnia, however administered save life. In the whole 33 antidotal experiments, I have not one single case of recovery to tell of.

You will find in a tabular form a comparison of the relative duration of life in the various animals with and without strychnine. In the first eight cases the difference is practically negligible, in the next six it is strongly against the antidote, while in the last two there is no apparent difference.

I am far from insisting on the mathematical accuracy of these figures. Mr. Jones' report shows that the amount of poison in the drop varied in some cases, though in by far the greater number of cases it was $\frac{1}{4}$ gr. of dry poison. It is, however, more than probable that these variations did not favor either the control or the antidotal experiments taken as a whole.

Much must also be allowed for the individual idiosyncrasy of any particular animal, as experience often showed me, and yet allowing for all this, I think that one plain lesson is to be learnt, viz., that given an animal with a

poisonous dose of cobra poison, the substantial injection of strychnine often hastened death very markedly, while it never could be said to materially retard it.

It would seem that death may be hastened by the antidote in two ways:—

- (1) By increasing the force and frequency of the circulation and thus aiding the diffusion of the virus.
- (2) By the exhausting reaction which strychnine undoubtedly produces on the nervous centres.

Some of you were witnesses of the experiments, and I would feel obliged if you would state your opinions on these moot points which undoubtedly are of very considerable interest.

Strychnine at the bar of these experiments has failed to prove its case as a savior of life, but I go a step further and impeach it on the threshold of its claim to any antidotal power whatever.

I believe that the antidotal action said to exist between strychnine and cobra poison is a delusion and a myth.

Before proceeding to the hard region of fact, allow me to deal with Dr. MULLER'S contention on theoretical grounds.

That gentleman in his letter, dated Melbourne, 28th June 1890, to the Chief Secretary of Victoria, states:—“That snake poison is a specific nerve poison, depressing, and in fatal cases suspending, the functions of the motor and vasomotor nerve centres, and that this action is purely dynamic—it follows as a matter of necessity that if snake poison depresses the functions of the above named centres, the successful antidote must be a remedy that stimulates the centres to increased functional activity. This remedy is strychnine.”

Now if you have once proved the statement that strychnine and cobra poison respectively stimulate and depress the identical same centres, you may confidently anticipate that they will exert on each other an antidotal physiological action, but is this the case?

Strychnine I take it is a comparatively simple substance and its action can be the more easily estimated.

Cobra poison, on the other hand, is on a different footing entirely. Little as we know of it, we have already grounds for believing that it consists of at least two poisonous substances, one of which acts in such a way as to excite the motor portion of the nervous system and produce convulsions, while the other depresses the nervous system. Either of these separately is fatal. For all we know, and this opinion is held by able chemists, the poison possibly consists not of two but of many poisonous substances.

Turn now from chemical composition to the symptoms of the two poisons. Are they the exact complements the one of the other?

Time does not allow the thorough dealing that this subject demands, but I think that anyone who gives the matter a careful thought will admit that while the strychnine avowedly acts chiefly, if not entirely, on the motor centres of the cord, cobra poison shows the clearest evidence that at a very early stage it affects the higher cerebral centres, and probably the cerebellum. How else can we account for the drowsiness, giddiness and other allied symptoms?

Now, let us leave the airy region of theory for the more solid ground of observed fact, and ask ourselves the question. In actual reality do we find that strychnine shows itself in a modified form in a cobra-poisoned animal, or that cobra poison modifies its power before strychnine?

Set the strychnine control experiments side by side with the antidotal experiments, and you will observe the following facts:—

1st.—That symptoms of strychnine poisoning manifest themselves as early after the injection of strychnine in the one case as in the other.

2nd.—That in the early stages the convulsions of strychnine are as violent in one case as in the other.

3rd.—That in later stages animals die from cobra poison with typical symptoms, and yet the least touch evokes an undoubted strychnine tremor in the animal up to within a minute of death. An intermediate stage occurs in which the victim starts on the least touch or sound, but has not the *vis* to respond with a convulsion.

4th.—That under the influence of a poisonous dose of strychnine the animal dies as surely when fully under the influence of cobra poison, as it does when no such poison has been given. See experiments 93, 94, 95, 96, 97, and 98.

A very noteworthy point is illustrated by several experiments in which though the animal was so deeply under cobra poison that its exhausted nervous system could not produce a spasm, yet a fatal dose of strychnine precipitated the inevitable end.

This to my mind is a very different thing from physiological antagonism or antidotal action. It is not that the two poisons counteract each other in any beneficial sense, but that the cobra poison has so exhausted and depressed the nervous system, that the motor cells and muscle fibres can no longer respond to the strychnine stimulus with their accustomed violence, though that stimulus is amply sufficient to kill the exhausted animal.

5th.—That in some cases, *e. g.*, 11, 29, and 51, strychnine administered in physiological doses seemed actually to determine at once the impending fatal issue.

6th.—That in an animal poisoned with cobra virus, strychnine may produce a temporary stimulation and so may give rise to a fallacious appearance of improvement. I have watched this sign with hope on several occasions, but alas! those hopes have ever been doomed to disappointment.

Cobra poison 'bides its time,' like the knight of old, but like him too, when the time comes to strike, when in fact the virus would have killed in the absence of any counterstemp, it claims its victim as surely as fate. Strychnisation then passes into cobra asthenia, and do what you will with your drug, the curtain drops. The action of the poison forcibly reminds one of those little lines—

The mills of God grind slowly
But they grind exceeding small,
They may seem to pass us over,
In the end they grind us all.

I now turn to the second division of the subject before us, *viz.*, the records of experiment on man. It will be well to premise this part of our subject by a short description of the symptoms of cobra, krait and daboia

poisoning as observed by men for whose evidence we owe and all have the profoundest respect.

My object in so doing is to enable us to distinguish the true symptoms of snake poisoning in the cases before us from the mass of symptoms which are constantly and erroneously attributed to snake-poisoning.

Shortly then we may say that the signs and symptoms of cobra poisoning are as follows:—

Locally, stinging, burning pain; wound may become swollen, red and painful on pressure. An interval now occurs ranging in observed cases from 15 minutes up to 4 hours, the average probably 1 hour. Exceptionally symptoms may begin at once. First constitutional symptom a feeling of intoxication.

Then, drooping of eyelids, loss of power in legs, inability to stand. Later loss of power of speech, paralysis of tongue and larynx, falling of lower jaw, profuse salivation, nausea, retching and vomiting. Still later general spread of paralysis, suffocation by saliva threatens, muscular twitchings, respiration slow and shallow, consciousness retained in some cases, lost in others. Finally respiration ceases. Heart continues to beat.

For the above details I am indebted to WALL's Indian Snake Poisons, pp. 10—14. From the same author we learn the following details about other snakes;—

Daboia Russellii.—Local signs and pain in wound much more marked in bites by *Daboia* than in cobra bites, and there is a large amount of blood effused. Otherwise the two wounds are alike. In the constitutional symptoms of *Daboia* poisoning we note certain points differentiating it from cobra poisoning—

1st.—Convulsions are violent and constant at an early stage, but do not necessarily prove fatal. They are quite unlike the convulsions possibly of dyspnoeal origin which usher in death in cobra-bite.

Respiration is at first hastened, and does not so soon become slow and shallow as it does under cobra poison influence. It is very irregular in characters. Pupils widely dilated by the *Daboia* virus. Salivation far from common. Bloody discharges, and albuminuria are the rule.

After the nerve symptoms pass off a period of blood poisoning ensues which may last for days and very often eventually proves fatal. Hæmorrhage and hæmorrhoids attend this period.

In *Bungarus* bite, death takes place in one of two ways. Either at once by symptoms indistinguishable from cobra, except by the fact that the interval between the bite and the incidence of symptoms is here longer than in cobra-bite or later after an incubation period of 26 days by symptoms of blood poisoning.

The bite of *Echis carinata* is said to resemble that of *Daboia* but to be less deadly.

Having in this way cleared the ground, I would ask you to turn to the analysis of the recorded cases, which I have made, and copies of which are handed round to you all.

I would divide these cases primarily into two sets:—

(a). Those in which the patient was undoubtedly bitten by a poisonous snake this being proved (1) by his death with typical symptoms, or (2) by the snake being caught and identified by a trustworthy and competent authority.

(b). Those in which the patient recovered and the snake was not identified.

I shall deal with these classes in order, beginning with class A.

Out of a total of 42 recorded cases, we find a fatal result in 7, viz., in cases 1, 2, 3, and 7, 8, 9, and 10, nor can the antidotal drug be said to have been spared in any of these cases, not even in case 2 in my opinion. Very telling is Hospital Assistant MISRA's observant remark, that he found strychnine a failure in those cases in which speech was affected. This paralytic failure of speech is a well-known symptom of snake-poisoning and points to the fact that these fatal cases, and they only, were *Thanatophidial*, while the rest were spurious. Further it is to be remembered that fatal cases may very likely have escaped publication, as human nature shrinks from recording its failures.

Now let me turn to the cases in which the poisonous snake was caught.

I think that with the correspondence in the *I. M. Gazette* before us, not one of us will hesitate to exclude DR. BANERJI's cases from this list.

I may further add that DR. BANERJI very kindly sent me a consignment of snakes.

Of these he labelled two specimens as *Daboia Russellii*, one *Daboia elegans* and one *Daboia*—(something, which I can't read).

In the bottles with his own labels there is difficulty in ascertaining that they are every one typical specimens of *Echis carinata*, a much less virulent snake.

Another snake he labelled as *Bungarus coeruleus*. This diagnosis seems incorrect. The snake is 4 ft. 9 ins. long and, as far as the color can be distinguished (the specimen is decomposing), it is banded some dark color and yellow. It is probably *B. fasciatus*.

Another snake was labelled *Ophiophagus elaps*. It is merely a dark cobra.

Two specimens of the harmless tree snake, *Psammophis bituin*, are labelled *Callophis Pentalineatus* and *Callophis Graillii* respectively.

The *callophis* is a very deadly snake allied to the krait. I may say that DR. HENDERSON and MR. THURSTON have confirmed in every respect my opinion as to the nature of these snakes. I thank them both for the trouble they have taken.

Nor can I include No. 28, Assistant Surgeon FITZPATRICK's case, as the diagnosis there avowedly rests on native opinion, than which nothing can be more fallacious.

I recently had a good specimen of *Dendrophis Picotus* sent me by an educated and very intelligent native pupil, who assured me that the snake was believed to be more deadly than the cobra.

With DR. GIFFARD's able assistance I experimented with this snake on guinea-pigs which are very sensitive to snake poison. The snake seized and shook the little animals, making them cry loudly, but with entirely negative results.

Case 27 is recorded by one well known as a careful and trustworthy observer, Surgeon-Lieutenant-Colonel OSWALD BAKER, but that officer particularly calls attention to the

absence of symptoms, and in no way ascribes the recovery to the very small dose of strychnine ($\frac{1}{10}$ gr.) that he gave.

Case 30 by Surgeon-Major THOMAS cannot be relied on, as that officer acknowledges to having left the treatment in the hand of his Hospital Assistant after himself giving two injections. The amount of strychnine injected also seems very uncertain.

Case 31 is an interesting contribution to snake poison literature. It is in every respect carefully noted and recorded. The animal was *sans doute* a cobra, but the prompt and efficient local treatment rapidly adopted is in itself probably sufficient and accounts for the cure.

Surgeon-Major EVANS met with a similar case in his own practice in which early local treatment saved an undoubted case of cobra-bite, and possibly under the same head is to be included DR. HENRI's recent case.

In case 31 not one symptom of cobra poison is recorded if we exclude drowsiness, and, with characteristic fairness and openness, the recorders note that they nearly lost their patient from strychnine poisoning, which indeed they nearly did.

As to the drowsiness, I have noted in strychnine control experiments on animals, that, after the symptoms of strychnisation have passed off, drowsiness invariably and very naturally ensues.

To this point DR. GIFFARD and others of you who saw my experiments can, I know, speak.

Case 32 very courteously contributed in a private letter by Surgeon-Lieutenant-Colonel WALLER-BARROW is too scanty to found much of an argument on. The snake was nipped and probably quite unable to strike efficiently.

In any case no symptoms of snake poison are recorded.

Lastly we have a recent contribution in Case 42. Here the animal was a young cobra only 16 inches long, and like all young cobras very vicious withal. Strychnine was freely given in three large doses without any avail. Indeed we learn that the patient got worse and worse. After the fourth injection, and $4\frac{1}{2}$ hours after the bite, the patient began to mend and in another $2\frac{1}{2}$ hours was much better.

The only note of immediate improvement recorded is that muscular spasms commenced. My experience from experiments prevents me from considering this *ipse facto* a true sign of improvement, and I fail to be convinced, as the case now stands, that the improvement was more than *post hoc*. At the most, it may be claimed that strychnine acted like any other cardiac and respiratory stimulant would have done, but that there was any specific antidotal action I cannot admit.

It is however a valuable addition to our knowledge and would have been much more so had the symptoms been more carefully noted in those last $2\frac{1}{2}$ hours.

Pregnant with meaning in connection with this case, and with case 25 are DR. WALL's words which I extract from p. 94 of his valuable book on cobra poisoning. He says: "If the victim does not succumb soon, a complete recovery is to be anticipated."

Let us now turn to the second class or class B in which the snake was not caught and the patient recovered.

These cases can be divided into two classes :—

- (1) Those shewing signs of snake poisoning.
- (2) Those shewing no such sign.

For convenience sake we will dispose of the second division first.

Case 4 reads to me like a typical case of fright. Surgeon Captain GIFFARD relates the history of a man brought under his care in a state of profound collapse, under the impression that he (the patient) was bitten by a snake. Brandy and the assurance that a scorpion was the offender wrought a complete cure. How much more violent and effectual would have been the recovery had strychnia been substituted for brandy!

Cases 5, 6, 11, 12, 13, 14, 15, 16, are too scantily reported to be of any value in evidence.

Cases 17—21 present no marked symptom of snake poisoning or at least none such are recorded if we exclude three cases in which 'drowsiness and giddiness' are mentioned. I think we can hardly put much stress on these symptoms alone. The recoveries too are too rapid even for the most sanguine strychnia advocates in this country, the longest recorded case being cured in three hours. This taken with the smallness of the strychnine dose used, the scantiness of the clinical notes and the absence of identification of the snakes will lead most critics to reject these cases as valid evidence.

Case 22 had a large assortment of treatment with a little strychnia thrown in, but his symptoms are amply covered by the supposition that he was deathly frightened.

Case 24 presented no symptom that fear will not account for. Only $\frac{1}{2}$ gr. was given and recovery was attained in two hours.

Case 25 too seems to have been merely a case of fright, no symptoms of snake bite presenting themselves.

Case 28 powerfully suggests hysteria. Only 15 grs. of strychnia was given. The patient was a female *et. 35*.

Case 29.—The evidence is scanty as to (1) the nature of snake and (2) presence of snake poisoning.

Cases 33—38 have already been dealt with. I fear we can lay little stress upon them. The same uncertainty must necessarily surround all cases by the same writer.

Cases 39, 40 and 41 must fall in for their share of suspicion.

Case 39 reads to me like an intoxicated man who injured his foot or else received a harmless bite on it.

Cases 40 and 41 differ strangely from the experience derived from experiment, and from one case which was probably viper bite recorded by WALL, convulsions and typical hæmorrhage are conspicuous by their absence, as is also the intense local pain of viper bite.

Hospital Assistant MISRA's three cases recorded in the *Indian Medical Record*, 12th October 1894, are of no value. The snakes were not caught, the notes are scanty, and the symptoms doubtful.

A few cases remain in which the history of the case suggest thanatophidial origin.

Case 23 reads like a slight case of snake-bite. The fact that seven hours elapsed before it came under treatment is suggestive of the idea that the dose was not a severe

one. In the recurrence of the symptom on the third and fourth day, it would seem that a neurotic element played a part.

Case 25 was also probably a slight one of snake poisoning. The absence of subcutaneous infiltration warns us that at least the dose was not large, even if the bite was thanatophidial. Dr. VAGHAN's idea that cobra poison does not cause such injection is directly opposed to the experience of WALL, and in this particular I can certainly bear that observer out, having constantly noted subcutaneous infiltration in animals even with diluted cobra poison. Dr. VAGHAN noted that he administered 3 grs. in 50 minutes without improvement. After another 1 gr. gradual improvement commenced. Was this *post hoc* or *propter hoc*? At least here we see none of that sudden disappearance of all symptoms over which Dr. MUELLER is so jubilant in his cases.

Case 42 is ably discussed. The fangs of the snake seem not to have penetrated, and it is doubtful how far the symptoms were due to cobra-bite. Dr. SARGENT notes that hysteria and fright were strong elements in the case, and he does not hesitate to shew us how nearly he lost his patient by over-strychnisation. It is to be regretted that all men are not equally honest.

Finally it is noteworthy that Dr. SARGENT does not credit strychnine with saving the case, though he thinks it hastened recovery. Very probably brandy or any other stimulant would have done the same.

Case 44 seems to have recovered from cobra poison and strychnine. In $1\frac{1}{2}$ hour $\frac{3}{4}$ gr. of strychnine was given, and the patient was then left to the mercies of his friends. During the next six hours, he grew worse and worse, though the jerking of the limbs showed he was under the influence of strychnine, for at least four hours of that time. Eventually nature prevailed, the two poisons were excreted and the man rallied.

I have endeavoured fairly but critically to review these cases. My aim has not been, and is not, to persuade any one of you to adopt the view to which I myself have been driven, but I hope rather that I may have been able to place facts before you and to allow you to judge, each one for yourselves.

For my part before I can accept the conclusions, Dr. MUELLER would force upon us, I must know of at least one recorded case, (1) in which a well grown poisonous snake struck a man, woman or child, (2) in which that snake was identified by a reliable authority and proved to possess fangs and a poison sac, or in which in another case, a fatal result followed a bite by this same snake, (3) in which symptoms of undoubted snake poisoning appeared and were definitely removed by the administration of strychnine.

I cannot accept cases in which strychnine was given and after an indefinite period 'the patient got better.'

No such cases are forthcoming, and to my mind while experiments on animals condemn, experiments on man do not definitely and distinctly support Dr. MUELLER's treatment.

I can only quote the words of one who rendered me valuable and valued assistance while I re-echo Dr. DYMORT's sentiments. "If I am bitten by a snake, I

will at least not superadd to my suffering the agonies of strychnisation. Let me die in peace."

It may be that words have fallen from me to-day which seem unkind to fellow-workers in this great and important field. If so, I can assure them that my intention was not to wound, but the interests at stake are such that I have felt it incumbent upon me to be 'faithful to truth at all costs.'

If to any I seem an idol-breaker, I would ask them to believe that in breaking their idol, I have broken my own, for I set out on this quest in the hope and belief that at least there was a strong nucleus of truth in the stories that garlanded the strychnia treatment of snake-bite. I have been rudely undeceived, but what profit is it to any one of us to nurse a jackass in the delusion that it is a form of beauty. It is better to awake from such a dream at once.

In conclusion I must thank the many who have accorded me valuable and willing help.

My best thanks are due to the Surgeon-General and the many officers of the I. M. S. and others who at the sacrifice of valuable time, came and witnessed the experiments on this subject. By so doing they have set on this work the stamp of genuineness which, had it been less public, many might have held it to lack.

I would thank Surgeon-Lieutenant-Colonel ALLISON for much courteous help with the proof sheets and other details. Surgeon-Captain THOMSON for so readily and valuably assisting me with all the information in his power. Mr. JONES, Professor of Physics at the Presidency College, for very kindly weighing specimens of poison for me. Mr. THURSTON and Dr. HENDERSON for ready assistance in the identification of snakes, and Mr. SAMBU SIVA my assistant professor and Mr. GOVINDAN my demonstrator for much willing and able help. Lastly, but far from least, I would tender my very best thanks to two officers of the I. M. S. who stinting neither time, labor nor pains, gave me almost throughout my work their constant and most practical help. By their clear headed advice and ever useful suggestions they contributed in no small measure to any success my work may have attained. I need not say that I refer to Surgeon-Major DYMOTT and Surgeon-Captain GIFFARD.

The President made the following remarks :—

"We have all heard with great interest the valuable paper by Surgeon-Lieutenant ELLIOT, a careful record of successfully made experiments, some of which I with others of you have had the opportunity of seeing carried out. I am sure we, who saw these experiments, will all agree that they could not have been more thoroughly performed or in a more scientific spirit than Dr. ELLIOT shewed. These experiments I consider clearly shew that the antidotal power of strychnia in cobra poisoning, as claimed for it by Dr. MUELLEN, does not exist; and, moreover, that in using it we are dealing with a dangerous remedy which itself is very likely to prove fatal, if not administered with the greatest caution and under the closest personal observation. The Government of India, not being satisfied that the result of the experiments submitted to it were conclusive enough, have ordered further trials and further reports. I consider it would be most desirable that these investigations of

Dr. ELLIOT should be given as wide a circulation as possible for the information of those medical officers who may have the opportunity of carrying out such further investigations in order to show them how necessary it is that such experiments should be carried out with great care and in a true scientific spirit."

Brigade Surgeon-Lieutenant-Colonel W. PAICE said :—

"As I was one of those who enjoyed the privilege of witnessing many of the interesting experiments upon which the valuable paper we have just heard read has been founded, I feel that it is my duty to say a few words.

First of all, I wish to thank Surgeon-Lieutenant ELLIOT for his kindness in having asked me to attend and next to bear witness to the care, accuracy and skill with which the numerous experiments were carried out and the results recorded. I was present on three days, and at three different sets of experiments. I watched them carefully and I am now fully satisfied that not only is strychnine not an antidote to cobra poison, but that, on the contrary, it actually hastens the end, and it does that in a most unpleasant way for the patient. If I were unfortunate enough to be bitten by a cobra, I would most certainly not let any one inject me with strychnine; neither would I permit any cobra poisoned patient of mine to be so tormented. I certainly think that these experiments not only justify but necessitate, in the interests of humanity, that Government should withdraw its order sanctioning experiments with strychnine on cobra poisoned human beings. Dr. VINCENT RICHARDS, in his valuable little book on 'Landmarks in Snake Poisoning' gives some very simple practical directions for the treatment of these cases which might with advantage be made more widely known. The intelligent policeman or village official would be much less likely to do harm with a piece of India rubber tubing than with a hypodermic syringe and a solution of strychnine. I may state that when serving in the Nellore District, a very "snakey" place, I used to go about with a piece of India-rubber tubing in my pocket, but though I served there nearly four years, I never got an opportunity of using it.

"One point in the experiments that interested me greatly was the well marked "currant jelly" condition of the tissues surrounding the cobra poison injection. It was so well marked that no one could mistake it for a moment. VINCENT RICHARDS lays great stress upon this point in the diagnosis of a poisoned bite from a non-poisonous one, and also upon the removal of all this "currant jelly" tissue in the treatment of the former, yet, as well as I remember, this is a point that is seldom touched upon in either a cured or fatal case. It ought certainly to be widely known.

"As a matter of personal faith, I believe that the deaths from snake-bite are very much exaggerated, and that the figures put down under this head include many murders of sorts. I have lived in India and Burma for over twenty-three years, and during that time have served all over the country from Palamcottah in the South to Nowgong, Central Provinces, in the North, and from Mangalore in the West to Toungoo, Burma, in the East, and in that time have seen only four cases of snake-bite, not one of which was fatal. Two of them were brought in

an apparently unconscious state; but when I found that this had come on immediately they had been bitten I did not put it down to snake poison. They recovered without strychnine. You may say that cobra bite is so rapidly fatal, there is seldom time to bring the patient to the medical officer for treatment. Granted; but it seems to me that if deaths from snake-bite were as common as they are said to be, I ought to have seen a corpse in my varied and fairly long service.

I noticed that Dr. ELLIOT spoke of injecting into the abdomen in preference to the thigh. We know he means the subcutaneous tissues of these parts, but it might be as well to say so."

Surgeon-Lieutenant-Colonel BROWN said:—

"Having had the privilege of witnessing the experiments on monkeys made by Surgeon-Lieutenant ELLIOT, I would like to state that I fully agree in the main with the conclusions that he has drawn from the experiments. To my mind they are quite conclusive as to the utter uselessness of strychnine as an antidote to cobra-poisoning in animals. There could be no doubt whatever that instead of in any way alleviating the symptoms or delaying the approach of death, strychnine made the animal suffer a great deal more than it otherwise would, if the cobra-poison had been allowed to act *per se*, and further strychnine undoubtedly hastened the onset of death.

In no way could strychnine be said to shew any power as an antidote, and no matter how the experiments were devised, the result was always the same; namely, a painful and more speedy death when strychnine was used than when it was not. Dr. ELLIOT has said that Surgeon-Major DYMOTT expressed his decision not to be injected with strychnine should he ever be bitten by a venomous snake, and I certainly am of the same opinion, and should I ever have the misfortune to suffer from snake-bite, I shall certainly not allow any one to inject strychnine into me—as long, at any rate, as I retain consciousness. Before sitting down, I shall like to add that the experiments were thoroughly conducted in a thoroughly scientific spirit, and Dr. ELLIOT was always anxious that every medical man who cared to do so, should witness as many of the experiments as possible. Further, I think that means should be taken to publish the admirable paper that we have just heard read, so that it may reach a wider circle than our own branch, especially as the matter is still under reference by the Government of India—and also because, as far as I know, no such valuable series of experiments has been undertaken either in India or elsewhere as the one, the delivery of the record of which, we have just had the privilege of listening to."

Surgeon-Lieutenant-Colonel H. ALLISON said:—

"I also had the privilege of witnessing some of the experiments carried out by Surgeon-Lieutenant ELLIOT and desire to add my testimony to the great care with which the experiments were conducted. I fully agree with the conclusions drawn from them, that strychnine is not an antidote to cobra poison."

Surgeon-Captain GIFFARD said:—

"Having been privileged to witness not only some but nearly the whole of Dr. ELLIOT's experiments, of the many points that have struck me, I consider the greatest

and the most significant to be, that in not one single instance has recovery taken place in any animal, with or without strychnine, into which had been injected one drop of cobra poison. Had there been a single doubtful case, I should have considered it a call for more experiments, but as matters now stand, the 'case' for strychnine must be considered 'closed' at least as far as animals are concerned. Of the remaining points I am so convinced of the danger of the use of strychnine; I say ~~was~~ advisedly, for of the danger of its abuse there can be no doubt, that I consider that not only would that drug fail to cure cases of poisoning by cobra poison in which the dose was such as to ensure death, but also I greatly fear that it may be found to cause death in those cases in which the dose was such that, if no treatment was adopted, recovery would or might ensue. I take it, that the profound shock and subsequent nervous depression and drowsiness always seen after marked strychninisation would militate very considerably against the recovery of those cases that might be considered, as it were, as the border line between recovery and death. I consider strychnine in animals to be not only "no antidote," but also a no problematic danger to the slightly poisoned case. I would also remind the meeting that Dr. ELLIOT's method of giving strychnine was no hard and fast rule, but with every endeavour to give the drug fair play, it was given in single and in multiple, in small and in large doses. Some of the members now present will remember that having been asked by Dr. ELLIOT towards the end of the experiments whether any one still had a lingering hope that some special manipulation of the dosage of strychnine might perhaps save one case, he then carried out the suggestions made and as before stated with the monotonously invariable result "death."

The following letter has been received from Surgeon-Major DYMOTT, who was present at most of the experiments:—

"I am sorry I was unable to be present when you read your paper. I saw so many of your experiments that it would be a failure of duty if I did not bear witness to the care and persistency with which you conducted your operations.

The results seemed to be so conclusive that before you had finished one-fourth of your experiments, I really thought that the question under consideration was sufficiently settled. In no case, where strychnine was injected after cobra poison, was there the slightest evidence that the strychnine in any way prolonged life.

Though you have undoubtedly proved that strychnine is not an antidote to cobra poison, the evidence in those cases where human beings have been bitten by snakes and treated with strychnine, does not so clearly shew this. There must be some reason for the apparent discrepancies in the results, and, on reading your paper, I at once noticed an important difference in the two classes of cases. Your experiments on animals were all made with a syringe, in order, as you say, to avoid the great and error-bringing element of fright and fear of death. In the cases quoted, where human beings were bitten, we may reasonably suppose that there existed this element of fright and fear, and, though strychnine may not be in the slightest degree an antidote to cobra poison, it may, and probably does, help to remove the condition produced by fright and fear.

There are, however, other equally efficient and far less dangerous remedies.

Your experiments have furnished still another instance of the benefit to mankind resulting from vivisection on the lower animals."

Surgeon-Lieut. R. H. ELLIOT very kindly sent me this article for publication. It was read before the Medical Branch of the British Medical Association.

FILARIAL DISEASE.*

BY SURGEON-MAJOR J. MITTLAND, M.D.

Elephantiasis and other diseases caused by the *Filaria Bancrofti* are so widely prevalent in certain parts of India, and there is still so much to be learnt regarding them, that the subject seems to be an especially fitting one for discussion at this Congress. Filariæ disease appears to be prevalent along the whole coast line of India, and in some places, such as Shertullay in Travancore and Streehareekota in the Nellore District, a large proportion of the inhabitants are said to be affected. Yet the disorder is often so insidious in its approach that cases are frequently overlooked by medical men, and there is strong reason for believing that the disease is much more common than is generally supposed.

It is exceedingly important that we should be able to recognise the disease in its early stages, as much may then be done to mitigate it, if suitable measures are adopted. Moreover, the medical man in India is so frequently called upon to examine candidates for employment in the service of the State, or recruits for the Army, or applicants for life insurance, that he should always be on the alert to detect the early manifestations of these disorders.

DR. MANSON has written so recently and so exhaustively on this topic, in DAVIDSON'S "Hygiene and Diseases of Warm Climates," that I have no intention of going over the general facts which he has so well described. All physicians who have had much experience of filarial disease will probably agree with him in most of his conclusions, and more especially so in his opinion, that the so-called Elephantiasis Arabum is merely one of the many manifestations of this protean disorder.

My chief object, however, is not to discuss any of the matters treated of so fully in the above-mentioned work, but to describe certain new facts which have come to light within the past eighteen months, and to discuss their bearing upon the pathology and treatment of certain forms of filarial disease.

Before proceeding further, it will be well to give a brief outline of certain cases to which frequent allusions will be made, and upon the facts of which most of the following observations are based.

No. I.—This was the case of a young Eurasian, who, although he had embryo filariæ in his blood, did not present any other evidences of disease. One day he received a blow upon his arm and this was followed in a week's time by an attack of lymphangitis at the injured part. The inflammation quickly subsided under treatment, but left an induration of the part affected. The lump of thickened tissue was excised and on dissection was found to contain a number of mature filariæ.

No. II.—This was a somewhat similar case to the last. A Mahomedan lad, who had filariæ in his blood, and who was suffering from an attack of acute synovitis of the knee joint, said to be of traumatic origin, suddenly developed lymphangitis of the arm. The inflammation soon subsided, but left two thickened masses which were subsequently excised and found to contain a number of mature filariæ.

No. III.—This was a Eurasian lad who had enlarged glands in the femoral region on both sides, and who also had filariæ in his blood. He had suffered from a few attacks of mild fever, but was otherwise in apparently good health. The mass of glands on one side was removed and on dissection was found to contain several mature filariæ. The operation was followed by complete disappearance of filariæ from the blood.

No. IV.—A Hindoo youth had enlarged and varicose glands in the femoral region on one side, and filariæ in his blood. He suffered from frequent and severe attacks of pain and fever. The glands were removed and the attacks of pain and fever ceased.

No. V.—A Eurasian lad with a swelling similar to that in the last case but with no filariæ in his blood. He also suffered from attacks of pain and fever. The glands were removed, but without benefit.

No. VI.—A similar case to the last. A Eurasian lad with varicose groin glands, but with no filariæ in his blood. He suffered from periodic attacks of pain and fever. The glands were removed but the result of the operation is not known.

Some of the filarial worms obtained from one of these cases were examined by DR. MANSON, and a description and illustrations of them were published in the *British Medical Journal* of the 21st April last. On comparing them with the description and drawings of the worms previously described by MAGALHAES, DR. MANSON was of opinion that these were specimens of the mature *filaria bancrofti*, but that MAGALHAES' filariæ are quite a new species.

Some of the cases which I have briefly narrated afford us new and interesting information regarding the habit of the filariæ and the manner in which these parasites dispose themselves in the lodging that they select for their residence. Surgeon-Lieutenant ELLIOT, who very kindly examined the mass of glands removed from the third case, says that "while dissecting a mass from one of the larger glands, a capsule seemed to have been burst and a much coiled elastic mass of worms sprung open with a watch-spring-like movement"—and further on he says "while dissecting one of the smaller glands, a membranous material, which apparently acted as a capsule, was torn across and a third worm discovered." His observations led him to conclude that the worms were in all probability encapsuled and they certainly were enclosed under pressure. In the tissues removed from the second case the parasites were contained in small cyst-like cavities about an eighth of an inch in diameter, and lined with what appeared to be an adventitious cyst wall formed of effused lymph. They were coiled up together in tangled masses and surrounded by pus. In the first case the worms were coiled up in a mass, but no cyst wall was noticed; allowance must, however, be made for the fact that the tissues had been macerated for some time previous to dissection, in a strong acid solution. One of the cysts contained two worms; a male and a female. Another cyst contained a solitary female. In the other instances the numbers contained in each separate cyst were not determined. Some of the worms were broken in the attempts to disentangle them, and hence it is not quite

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

certain what the total number, discovered was in the three cases; but twelve females and five males were counted.

In the first two cases the worms were either contained in lymphatic vessels or were in close relation to them, but in the third case they were situated in the interior of lymphatic glands. The latter is a fact not previously observed, and bears, as we shall see, an important relation to the pathology of certain forms of filarial disease, and more especially to their treatment. A consideration of these facts appears to warrant the following conclusions, *vis.*, (1) that the worms may be found not only in the lymphatic vessels, but also within the lymphatic glands; (2) that they lie coiled up in tangled masses which are enclosed, under pressure, within small cyst-like cavities; and (3) that each cavity may contain one or more worms.

Passing to a consideration of the lesions which result from the presence of the filariae, we find one or two interesting points for discussion. In case No. I there was a blow on the arm which probably killed the filariae, and an effort was then made by the tissues to throw off the offending bodies by setting up inflammation. In case No. II the parasites died and their dead bodies gave rise to inflammation and suppuration, but the cause of their death, in this case, was obscure. That certain diseases of the host have an influence upon the filariae is evidenced by the fact that periodicity in the appearance of the embryos in the blood is disturbed by the febrile condition. It is also not improbable that some drugs, such as quinine and mercury, have an effect upon them. It is not uncommon to find that the onset of elephantiasis has been coincident with an attack of syphilis, and indeed many of the old writers ascribed the disease to syphilis. May not the syphilitic virus, or some of the remedies used for its cure, cause the worm to abort, or even cause its death? In case No. III the natural assumption would be that the enlargement of the glands was caused by the parasites contained within them. It might be said on the other hand that the fact of the glands being enlarged on both sides of the body, pointed to the probability of an obstruction high up in the lymphatic system; the dilatation of the lymphatics in the groin being merely part of a general distension of the whole lymphatic system situated above the glands. If this were the case, however, we should have found that the lymph contained in the groin glands was chylous in character. This was not the case, nor were there any indications whatever of general dilatation of the lymphatics of the trunk. This point, as we shall presently see, has an important bearing upon the question of treatment. It seems reasonable, on the whole, to assume that the changes in the glands in this case were due to the parasites contained within them; the direct cause probably being plugging of the ducts by prematurely discharged ova.

Let us now pass to a consideration of the all important subject of treatment. Do the facts that have been brought to light by these and other cases afford us any indications as to treatment? Five years and a half ago, a young man, whose case (No. IV) has already been alluded to, came under my care, suffering from varicose glands of the groin, and on examining his blood filariae were found.

He suffered from frequent and severe attacks of pain and fever, so much so that he was unable to follow any occupation, and he begged for something to be done to afford him relief. In thinking over his case it struck me that the parasites might possibly be situated within the diseased glands themselves, and that, if this were the case, removal of the glands might afford the patient relief from further trouble. When this suggestion was made to the patient he readily consented to an operation being undertaken. The mass of diseased glands was accordingly removed by operation and the patient got well. Five months afterwards a swelling appeared in the opposite groin, but there were no more attacks of fever and pain and he was, and still is, able to carry on an active life in the mercantile profession. The mass of glands that was removed was unfortunately lost, and no opportunity obtained for examining them, so that it is impossible to say whether any parasites were present within them or not. The satisfactory result of the case however seemed to justify the hope that similar operations might be of benefit in other cases of filarial disease, and the recent discovery of filariae within the diseased lymphatic glands, in a case very similar to the above, appears to afford an additional justification of the operation.

Certain French surgeons, who have investigated the question, are opposed to this operation on the grounds that it is very liable to be followed by septicæmia. But such an objection can scarcely be considered a valid one in these days of antiseptic surgery.

In advocating operations for the removal of diseased lymphatic glands in cases of filarial disease, I would, of course, exclude all those cases in which the local lesions are manifestly merely a part of a widespread dilatation of the lymphatic system, due to an obstruction situated high up, in or near, the thoracic duct. MANSON'S experience lead him to believe that very many, or nearly all, cases of varicose groin glands belonged to this class, as evidenced by the fact that the fluid contained within them was chylous. Our experience in Madras is opposed to this. I have only seen one case in which there was a suspicion of the obstruction being seated at all high up, and no cases in which chyluria had ever occurred. Putting aside such cases as these, it seems to me that there are a considerable number of instances in which operative treatment promises to be of service in mitigating, if not in curing, the disease.

These cases may, for the sake of convenience, be divided into the three following classes:—*Firstly*, cases in which the lymphatic glands are enlarged and varicose and in which filariae are found in the blood, but where the diseased condition is not part of a widespread dilatation of the lymphatic system. When we meet with such a case and the patient suffers from frequent attacks of fever and pain, which seriously disable him, and render him unfit for any active occupation, I think we should recommend an operation. The experience furnished by the case already related shews that very great relief may result from removal of the diseased glands. Whether we should operate on cases in which similar lesions are present, but which are not attended by any suffering or inconvenience, is another question, and one that cannot be definitely settled until further experience has been gained.

The case alluded to as No. III may be considered an example of this class, and furnishes evidence in favor of operation. The patient had varicose glands in both groins and many filariæ in his blood, but he was not suffering from pain or inconvenience. Nevertheless, the presence of the tumours, and the knowledge of the disease, caused him great mental anxiety, and he was anxious to undergo any treatment, operative or otherwise, which offered a chance of getting rid of the parasites. On the day following the operation all filariæ disappeared from his blood, nor have any been seen since then, although a period of three months has elapsed. These facts favor the belief that all the parasites have been removed and that the patient has been delivered from all chances of future trouble. Too short a time has elapsed to enable us to say more than this, but the case appears to furnish strong evidence in favor of operation.

The second class of cases are those in which, although the glands are enlarged and varicose, yet there are no filariæ in the blood. Cases belonging to this class are not at all uncommon. During the past eighteen months I have operated upon three such cases, two of which have already been alluded to as Cases IV and V. The fact that there are no filariæ in the blood does not shew, as MANSON long ago pointed out, that the disease is not of filarial origin, but rather that that part of the lymphatic system, which is inhabited by the parasite, is shut off from all communication with the blood, by blocking of the passages. When such cases are accompanied by much suffering, an operation may afford relief. The probabilities are that the dilatation of the lymphatic channels is purely local, and the operation is not attended by any special danger. It is unfortunate that two out of the three cases alluded to have been lost sight of, and the result in those instances not known. In the third case, I regret to say, there has been no benefit whatever up to this time. The failure appears to be due to the operation not having been a sufficiently radical one. The femoral glands alone were removed, whereas the inguinal glands appear involved in the disease, for pain is now felt in the latter and they have become swollen. It is a question whether we ought not to recommend operation in all cases of this class, no matter whether there are attacks of pain or not. If, as we have grounds for believing, filariæ are present in the glands, there is always a possibility of some further development of the disease taking place, unless this be prevented by timely extirpation of the glands along with the parasites concealed within them.

The third class of cases are those in which, under ordinary circumstances, there are no indications of filarial infection, but in which, owing to causes that may or may not be evident, inflammation is suddenly developed in that part of the lymphatics that is inhabited by the parasite. Examples of such cases are those alluded to as Nos. VIII and II. Cases of this nature are not uncommon, and I have met with several others besides those related in this paper. It is probable that in many cases the worms are dead; still we have no certainty of this, and when the part affected is easily accessible, it is better to make an attempt to remove the parasite.

These are the three classes of cases in which it seems justifiable to hope that operative treatment may, in some instances, be a means not only of alleviating the disease, but possibly of curing it.

Before concluding this paper, I should like to draw attention to one or two points connected with the operation for removal of elephantiasis of the scrotum and penis. The difficulty of covering in the structures, laid bare during this operation, has led to the suggestion of a variety of procedures for effecting this object. At one time it was the practice to preserve portions of the scrotum, as flaps, to cover in the testicles, but the result of experience soon proved the uselessness of such attempts, and the light shed upon the pathology of the disease has served to demonstrate the cause of such failures. This procedure is fortunately unnecessary, because we can attain the same end by different means, and the testicles can be easily and effectively covered in by skin taken from the thigh. This is effected as follows:—The scrotum having been completely removed, the skin on either side of the wound, that is to say, the skin of the thigh, is dissected up from the subcutaneous tissue for a distance of two inches opposite the centre of the wound, and to a lesser extent above and below this point. The patient's thighs are then approximated and the two portions of skin easily united with one another in the middle line, completely closing in the testicles and embracing the root of the penis.

Various methods of covering the penis with flaps of healthy skin have been tried, but none have proved satisfactory. I have for some time practised THIERSON'S method of skin-grafting, and strongly recommend this procedure as one which expedites the healing of the wound, and to a great extent prevents that contraction of the penis, which always results, unless some such measure is adopted. The procedure consists in the application of a number of skin grafts, at the time of the operation, and is carried out as follows: Several long strips are cut from the anterior surface of the thigh, the skin of which has been as thoroughly purified as possible. The section of the skin should be made deep enough to include the tops of the papillæ, but no deeper; and after the graft has been stripped off, a white surface should be left, dotted over with minute drops of blood. The strips of skin are next divided into portions about half an inch square and laid smoothly on the surface of the penis, so as to cover the whole organ, which is then covered with a dressing of boric acid ointment, fastened so securely as to avoid any chance of its slipping. If the grafts are cut of a larger size than those described they are more apt to become displaced than if smaller ones are used.

PERSISTENT AMBLYOPIA DUE TO QUININE.

A man thirty-five years of age recently came under the notice of M. DEBRIÈRES. The patient complained that for the past three months all objects perceived appeared to him to be covered with down, and that, in addition, he was colour-blind. This visual trouble had come on one morning after the ingestion (on the previous evening) of four teaspoonfuls of sulphate of quinine, he being at the time under the influence of drink. As a rule, this quinic amblyopia disappears rapidly, but in this case the condition was persistent, probably owing to alcoholism.—*Querc.*

THE NEED OF A SANITARY SERVICE FOR INDIA.

By W. J. SIMPSON, M.D., M.R.C.P., D.P.H.

Health Officer of Calcutta.

INDIAN medical men have always taken an interest in the sanitation of those parts of India in which they have been stationed and have from time to time pressed on the attention of the Government the desirability of introducing measures for the removal of unhealthy conditions. These representations have invariably received careful and courteous consideration, and have been attended with considerable success, for to them are due, *firstly*, the vast improvement in the health of the army, which has taken place; *secondly*, the appointment of sanitary commissioners with its consequent recording of the health conditions of the civil population, the collection of statistics, the recent sanitary progress effected in large towns, notably in water-supply, the spread of vaccination and the management of large fairs; and, *thirdly*, the appointment of central boards of health in each province, all of which may be justly claimed by the Indian Government as achievements of no small importance, and on which they may be warmly congratulated. Not then forgetful of the past and of the advances which have been made under great difficulties, we medical men shall, however, only be following our old traditions when we undertake to point out the great defects in the existing system of sanitation in India and the measures necessary for further progress. And this is the purpose of the present paper.

There is no necessity of marshalling an array of striking statistics to prove the insanitary condition of the more advanced parts of India. That has been done many times previously, and it will therefore suffice in passing, to merely bring to the recollection of the members of the Congress that in 1892, which is the year dealt with in the last report issued by the Sanitary Commissioner of India, there were in the European army 1,509 admissions and 376 deaths from enteric fever; and in the civil population out of over 7 millions deaths recorded more than $\frac{1}{2}$ million are ascribed to cholera and over $4\frac{1}{2}$ millions to fevers. These are remarkable figures, and reveal in their own way the unhealthy state of the country. But to come down to a still later period than that of the Sanitary Commissioner's report, two events which have happened during the present year furnish startling evidence of the unsafe condition of the country in regard to health matters. One is the calamity that befell the East Lancashire Regiment stationed at Lucknow, in July and August, in which, notwithstanding every effort on the part of the medical officers, out of a total strength of 778 men 138 were attacked with cholera, of whom 92 died; the other is the disastrous outbreak of cholera which occurred in August last in the Sir JAMES WATSON Hospital in Bombay, in which out of nearly 400 patients being treated in the hospital for *intestinal diseases* 84 were attacked with cholera, of whom 36 died. In the army and civil population alike then the defence against preventable disease is extremely weak and uncertain. There can be no doubt about the preventable nature of typhoid and cholera, and

this being so, the same question may be asked at the first Indian Medical Congress as that put by His Royal Highness the Prince of Wales in his presidential address to the Seventh International Congress of Hygiene and Demography, when referring to preventable diseases:—"If preventable, why not prevented?" For India the answer to this question is plain and clear. It is that as regards the civil population, which necessarily affects the army in its midst, there is no efficient sanitary service, whose duty it is to prevent preventable disease. Impressed though I have been for a long time with this fact, yet, prior to placing before the Congress my views relating to the need of a more efficient sanitary service for India and the basis on which that service should be established, I felt it incumbent on me to consult a number of the civil surgeons distributed over different parts of India and invite their opinions on the subject of municipal sanitation. I confined myself to municipal sanitation, for it seemed to me desirable to follow the lines of least resistance and endeavour to secure efficiency here before attempting seriously any advance in the direction of village sanitation. With that object in view, I addressed to the Civil Surgeons the following questions:—

- (1). As a Civil Surgeon, have you sanitary duties in the municipality? (b). In what do these duties consist? (c). Does the municipality place at your disposal a certain sum of money for this work?
- (2). Do you think the existing arrangements good or not, and why?
- (3). What organization for sanitary inspection and sanitary duties, *excluding vaccination*, exists in the municipality? (b). Is this organization under the Chairman of the municipality or directly under yourself?
- (4). If there is an organization, what modifications or improvements do you think desirable?
- (5). Apart from the Sanitary Commissioners and Deputy Sanitary Commissioners of the Province, do you think that a qualified local Sanitary Inspector or Sanitary Officer should be attached for sanitary work to the municipality?
- (6). Should this Sanitary Officer be under the Chairman of the municipality or under the Civil Surgeon?
- (7). Do you think that some of the sanitary duties could be combined with those of the present Assistant Surgeon, or should there be an additional qualified man paid by the municipality placed under the Civil Surgeon for that purpose?

Some 70 Civil Surgeons responded to my invitation, many of them supplementing the space I had allotted to each question by private letters entering more fully into the matter. All exhibited a keen interest in the subject, and my first duty on this occasion is to cordially thank those gentlemen for their great courtesy and assistance. A *résumé* of their opinions has been attached to this paper, and it is remarkable how unanimous these opinions are on the unsatisfactory state of the present arrangements, the powerlessness, as a rule, of the Civil Surgeon in sanitary matters, and the necessity for improvement. Equally unanimous are the opinions given regarding the undesirability of the Assistant Surgeon taking over any sanitary duties, *first*, because he appears to be a very hard worked official; and, *secondly*, because sanitary functions

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

devolving upon him would likely render him unpopular and disturb the confidence and esteem he is now held in by his patients. Instead of employing locally the Assistant Surgeon for superintending sanitary matters, most of my correspondents are in favor of a specially qualified man, some of them suggesting officers in the Subordinate Medical Department, such as Apothecaries, Civil Hospital Assistants and others. Among the suggestions is one, that in each province there should be a staff of Assistant Surgeons trained in hygiene and sanitation especially, graded and receiving the same pay as Assistant Surgeons in the medical branch, the higher graded men being employed by the larger municipalities; but Assistant Surgeons in the sanitary branch not to be interchangeable with those of the medical branch. These suggestions and others to be found in the summary of opinions in the appendix disclose the sympathetic interest with which the whole question of avoidable sickness and its prevention is considered by the Civil Surgeons.

From the information I have collected, it is evident that the power in sanitary matters lies wholly with the municipalities. Government in an undefined way expects the Civil Surgeon to be the adviser on sanitation to the municipalities in his district, but has invested him with no real authority or power to enforce his recommendations, or see that they are carried out, and unless he happens to be Chairman of the municipality as at Puri, a circumstance due mainly to special attention having been directed to the insanitary condition of this town, or unless the Chairman of the municipality happens to be a European who is ready to listen to the Civil Surgeon's advice, the system breaks down. As a member of the Board the Civil Surgeon may, by his personal influence, be able to get many improvements carried out, especially if they do not involve much expense. As a general rule, however, should a Civil Surgeon in the peculiar position he now occupies, make himself active in sanitary matters, his want of power is soon brought home to him by his advice being disregarded or by a polite note, stating that there are "no funds available." On the other hand, it not unfrequently happens that the Civil Surgeon's time is so occupied with his medical duties that it is quite impossible for him to devote his attention to sanitary matters.

The consequence of the delegation of power in sanitary matters to local authorities without introducing simultaneously an effective system of authoritative guidance and control, has not been sufficiently realised, nor has its paralyzing effect been sufficiently appreciated to rouse the Government to action. From a sanitary point of view, it is deplorable that the introduction of local self-government should have placed the sanitary administration of the country in such a position. In every great progressive measure introduced, much that is unexpected and unforeseen is almost certain to subsequently manifest itself and require after-adjustment. So it has happened with the scheme of local self-government for the more advanced parts of India. The defect which is the most patent and the most injurious is the total absence of any machinery to carry on local Government sanitation. The transfer of power and of duties relating to public health to local authorities, totally unacquainted with the

principles or practice of preventive medicine, and the omission to provide at the same time an efficient and strong local and central agency to guide and control these authorities, are the two important factors at work, bringing discredit on local self-government and impeding sanitary progress in this country as a whole.

The kind of agency and the necessity for it will be best shewn by a comparison of the sanitary service in England and that in India.

In England with a population of a little over 26 millions and an area of 58,310 square miles, there are over 1,500 medical officers of health for municipalities and sanitary areas, rural and urban. There are also 12 county medical officers of health and more are being gradually appointed. These, with the army of Sanitary Inspectors under them, constitute the local agency of the sanitary service in England. In addition, there is the central agency, of the local Government Board with 14 medical officers and medical inspectors, whose time is entirely devoted to enquiries into special outbreaks, inspection work and control of local authorities.

This organisation is gigantic when compared with that in India, where the guidance and control of local sanitary authorities might be considered to be more needed than in England.

Bengal, one of the principal and most advanced provinces of India, which is more than $2\frac{1}{2}$ times the area of England and contains nearly $2\frac{1}{2}$ times its population, has a Health Officer for the metropolis, 48 Civil Surgeons, who are *ex-officio* Health Officers, and whose unsatisfactory position has already been alluded to, one Sanitary Commissioner and three Deputy Sanitary Commissioners. Were Bengal alone provided with the same strength of sanitary officers per population and per area as in England, then instead of four Sanitary and Deputy Sanitary Commissioners, there would be 35, and some 3,200 Health Officers. I am not including in this list the army of Sanitary Inspectors, who in England are necessarily more numerous than the Health Officers; nor Sanitary Engineers, of whom there is now a large number. This contrast will serve to shew the defenceless state of Bengal against disease, the absence of the possibility of efficient administration in health matters and the necessity for large and comprehensive changes. Moreover, that which prevails in Bengal prevails more or less and is necessary in Madras, Bombay, the N.-W. P. and Oudh, the Central Provinces, and the more advanced parts of the Punjab, Assam and Burmah. In the less advanced, I am inclined to think that the planter and road-maker are the best sanitary agents. Until the administration of public health is placed on something like a proper basis, it is premature to blame the local authorities in India for their incapability in coping with insanitary conditions. Without a strong local and central agency to guide and assist them the efforts of the local authorities at the best must be misdirected and costly, for sanitation is no exception to the rule which pertains to all specialties, viz., that knowledge is necessary for its practice.

The visits of the Sanitary Commissioner and his criticisms and advice in the shape of reports are infrequent and not well understood. The reports necessarily contain a dreadful picture of sins of omission and commission, and show

a large amount of work to be done. The effect on the local authority is bewildering as to how the suggested improvements should be made, succeeded by alarm as to prospective cost. A spasmodic and feeble attempt, of varying duration but never long, is usually made to do something, but the attempt soon breaks down and the old condition of affairs re-appears, while the plea of poverty and want of funds is brought forward as an excellent reason for letting things remain as they were. The usual phrase employed against nearly every proposed sanitary improvement is cost and want of funds. By repetition the expression has almost gained an axiomatic position in Indian sanitation, and is permitted to pass as something indisputable. In populous towns the cost must avowedly be great, for the requirements are large, and tax the ingenuity of the most economical sanitary engineers. Still it should not be forgotten that the funds available are also proportionately large. In small towns and villages it is quite exceptional for the necessary improvements to be beyond the resources of the locality, if these are carefully husbanded. It is not with the construction of large engineering works that the sanitation of the major portion of India has to be commenced. Were every municipality to-day made a present of the most costly schemes and placed in the best conditions as to its water-supply, drainage and conservancy, each would be in an unhealthy condition in the course of a year, were there no one with authority and special knowledge in the locality to supervise its public health.

As in other countries, three-fourths of the sanitary work to be done in India consists in the checking of epidemics and the strict enforcement locally of good sanitary laws, not so much by costly structural works—though in large cities these also become necessary—but by systematically and constantly removing, checking and preventing those conditions detrimental to health, which individuals, from ignorance, carelessness or greed, insist on establishing. For this purpose a knowledge of the laws of health and of their application to the conditions of city, town, village or district is requisite, which can only be acquired by special training. Progress can be made under no other conditions. The supposition that any body of men, be they ever so highly educated, municipal commissioners or others, in India or elsewhere, possess intuitively a knowledge of the laws of health and of preventive medicine and are able to apply that knowledge in a practical and effective manner, will not stand the slightest examination. It is obviously unsound, and a sanitary administration based on such an assumption would be mere charlatanism. For any effective administration a sanitary service of trained men is required, who shall be interested in the special work; and the question comes to be, how such a service shall be formed in India on the most economical and efficient plan. I suggest that it should be done by developing and enlarging for purposes of control, enquiry and scientific work, the existing imperial and provincial agency under the Sanitary Commissioner, and also by creating a new agency for local work. This new agency which should, as a rule, be indigenous in its nature, would open up to the Indian medical talent of the country a new field of activity and occupation. Both agencies would be so connected that,

in the event of particular individuals, distinguishing themselves and showing special aptitude in the local service, the reward would be promotion to the central service.

It is unnecessary here to enter into the details of a scheme of this kind. All that is necessary is to indicate the broad outlines which are as follows:—

1. The complete separation of the sanitation of the army and of the military cantonments from that of the civil population.
2. The special sanitary training of students in the medical and veterinary colleges and schools of India; and the affording to other classes of students facilities for obtaining, when desired, special training in sanitary engineering and architecture in the engineering colleges and technical schools.
3. The compelling of each municipality or combination or group of municipalities or local authorities to appoint a Health Officer after a certain date. Such officer's appointment, pay, leave, dismissal, etc. being subject to the approval of the Sanitary Commissioner.
4. The formation on every municipal board of a small but special sanitary committee with a medical man, and, when possible, the Civil Surgeon as President and the compulsory setting aside annually of a certain sum of money to be placed at the committee's disposal for sanitary work only.
5. The appointment of the Civil Surgeon on a proper remuneration with defined powers as Chief Consultant Health Officer of the district, and in those places in which he is not available either owing to overwork or other cause, the appointment of a special district Health Officer.
6. The placing of the local and district Health Officers in close relationship with the Sanitary Commissioner of the province.
7. The placing of the Provincial Sanitary Commissioners in touch with the Imperial Sanitary Office.
8. The representation of health matters to the Imperial Council.

To deal with the army first, I would remove the whole of the sanitary administration of the army from the Sanitary Commissioner with Government of India, and place it under the army medical authorities. The civil population is quite sufficient for the Sanitary Commissioner with the Government of India to deal with. The army should possess its own sanitary organisation, and it should certainly possess full control over its permanent military stations, and every cantonment should have a well defined and extensive neutral zone, separating it from the districts under the several local authorities around them. No one not really belonging to that cantonment should be allowed to live within that zone. The strip of land should be grass land and used for parade purposes, and a dairy farm might be placed on part of it, and directly under the control of the cantonment authorities. The present unsatisfactory condition of affairs in regard to cantonments may be seen by the members of the Congress at Dum-Dum a few miles from Calcutta. There they will see filthy bazaars, filthy businesses and filthy tanks in close proximity to the cantonment and a public road passing through the cantonment itself. In autumn last 64 natives and 2 Europeans were attacked with cholera

within a stone's throw of the British Infantry lines. Of the 33 deaths which occurred, the first 15 were around one tank and quite near to the cantonment bazaar. The Cantonment Magistrate lives at Barrackpur, of which place he has also charge. Both Magistrate and the Dum-Dum Municipal authorities were written to, but few steps were taken. A young medical officer, Surgn. Captain WINTER, who acts as assistant to the Civil Surgeon of the 24 Pergunnahs, did everything he could to allay the epidemic, but he had no special power. The military authorities were practically helpless, until I suggested that Surgeon-Major HARWOOD should take the matter into his own hands, quite irrespective of law or power, get the police to place a policeman over the infected tank to prevent people from drinking the water, and as soon as possible to empty a cartload of chloride of lime into the tank. Surgeon-Major HARWOOD succeeded in getting the policeman, who appears to have thought so lightly of his duties that he drank the water himself, and died of cholera within 24 hours. This had more effect on the inhabitants than any previous warnings, and deterred them from further drinking of the tank water, and in the meantime chloride of lime and phenyle were thrown into the tank. Other tanks, however, by this time had become polluted with the cholera organism, and it is impossible to know what might have happened, had not a filtered water-supply to the troops been just completed, and Surgeon-Major HARWOOD had the new supply promptly turned on, a standpost being conveniently situated on the very banks of the polluted tank. An interesting sequel to Surgeon-Major HARWOOD's throwing the cartload of lime and other disinfectants into the tank, is a letter from a pleader in Calcutta, threatening him with legal proceedings, unless he pays Rs. 400 to the man who leased the tank for fishing purposes. The fish of course died, and had to be promptly removed and buried. This account of Dum-Dum and its cholera will show that reform in sanitary matters in relation to the troops is urgently needed.

To pass on to the sanitary administration of the civil population, the first essential is a trained service, and the only way in which the material is to be obtained from which such a sanitary service can be drawn is by special education at the medical and veterinary schools and colleges. In vernacular and European medical colleges and schools a special course of hygiene should form a compulsory part of the ordinary curriculum. Something of the kind exists in the medical colleges, but it is far from meeting the requirements of the time. Special degrees and diplomas in public health might also be instituted, the examination for which should be open only to those who have undergone, in addition to the ordinary course of hygiene, a six months' practical training in public health and laboratory work. Aspirants to the position of Sanitary Engineers, Municipal Engineers, Secretaries to the smaller Municipalities, Superintendents and Sanitary Inspectors, should also possess a knowledge of sanitation, and opportunities ought to be afforded them of studying that part of sanitary science with which they may be called upon to deal, and for this purpose I would advocate that sanitary engineering and architecture should be taught at Seebore College in Bengal, as well as in the

technical schools, a certificate being granted to those pupils who have especially qualified themselves in these and kindred subjects bearing on sanitation. It must be admitted that certain expenses would fall on the Government in the appointment of a professor and assistant professors and the establishment of a properly equipped laboratory at each of the schools and colleges, but the cost might be reduced by the laboratories and staff being utilised for the sanitary examination of food, water and other articles sent by the municipalities in the district, a certain contribution being made by each of the larger ones according to its size and importance. An arrangement of this kind would secure a number of centrally situated laboratories, to which the whole scientific work of the surrounding districts could converge. It would save the larger municipalities the expense of providing a laboratory for themselves. It would insure an ample supply of articles at every medical school for teaching purposes, and it would furnish the Government with laboratories, where any particular kind of research pertaining to medicine could be carried on.

With a body of trained men ready, the next step is to compel every municipality or combination of local authorities, after a specified date, for instance in 1900 or 1902, to appoint a qualified Health Officer, whose duties would be to superintend the registration of vital statistics, the vaccination of those within his jurisdiction, and the sanitation of the locality under him. He would work with the especial sanitary committee in each municipality—an arrangement which by separating general municipal matters from those relating to sanitation would secure closer attention.

He would also be in direct communication with the Civil Surgeon or District Health Officer, and through him with the Sanitary Commissioner. The Civil Surgeon of the district, or specially appointed District Health Officer, would in some respects correspond to the county Health Officer in England and the Collector to the county authority.

Under the proposed arrangements there is no necessity for the Sanitary Commissioner of the province, who should be the Director of the department travelling about from place to place and performing the duties of an Inspector; nor would the Deputy Sanitary Commissioners occupy their time in general inspection, but devote their attention to enquiries into special outbreaks of diseases and their causes, to investigations into the causes of continued or special unhealthiness of particular localities and to visiting particular municipalities at the request of the District Health Officer made to the Sanitary Commissioner. Attached to the Sanitary Board, which is already formed, should be two or more Sanitary Engineer Inspectors to enquire into and report to the Board the cost, efficiency and character of any scheme of water-supply and drainage proposed by a municipality. It is not the function of the Board to draw up schemes for any local authority, but to check proposals that are costly, insanitary and inefficient.

Lastly, in any scheme of a sanitary service devised, no thoughtful sanitarian can lose sight of the fact that in a country like India sanitation is intimately connected with the food question. If 7½ millions people die annually

more than that number are born and live. Protection of the population by sanitary measures renders the number of mouths to be filled more numerous. Against this may be placed the fact that with a better state of health, permitting of more steady labor, food production is also increased. But it appears to me that the sanitation which limits itself to the diseases of man is very incomplete. Sanitary science deals not only with the diseases of man but with those of animals and of the vegetable world. A sanitary department should include in its duties the preservation of the cattle of the country from the murrains and plagues by which they are constantly attacked, and the preservation from pests and blights of the agricultural products of the fields. With that view, provision should be made for the investigation of these and the adoption of the best means of preventing them. The civil veterinary department should form a part of the sanitary service. The extra work done in the fields by the animals saved from epizootics with the extra produce and saving to the farmer, will develop an additional source of food supply, besides the milk and its products derived from the milch cows preserved from disease. Similarly that portion of the agricultural department concerned with disease of field or other produce should be amalgamated with the sanitary service of the country.

As, however, the investigation of disease, whether that of man, beast or plant, forms rather the scientific department of the sanitary service as distinguished from the administrative, this portion might be merged into one Scientific Institute for India, consisting of experts in the several branches and under the Sanitary Commissioner of India.

THE CURATIVE VALUE OF ARSENIC IN ASTHMA.

By ASSISTANT SURGEON H. D. PANT, L.M.S.

Gonda, Oudh.

THE treatment of well-established cases of bronchial asthma is so unsatisfactory, notwithstanding the host of remedies recommended in text-books, that in most cases we aim at nothing more than relief at the time of its paroxysm, allowing the patient to undergo the same agonies again and again at longer or shorter intervals to be again cut short by one or other remedy so profusely enumerated in books of medicine. Of course to treat rationally, it is absolutely necessary to find out the cause of the disease in every case and remove it as far as lies in the power of the medical man. This is the key note of medical science, but how far this is possible in treating cases of asthma, I leave it to practitioners who have had to deal with cases of this nature. On my part I confess I was not able to cure any cases of asthma which came under my treatment before I knew the value of large doses of arsenic given perseveringly for a month or more. I have also seen patients who had been under the treatment of both European and Indian medical practitioners for whom medical science had not done more than provide them with means of relief by resorting to all sorts of depressant, sedative and antispasmodic medicines whenever the fit came on.

A Deputy Collector, who had long undergone treatment at the hands of well-known medical men in Calcutta and elsewhere, used to tell me jocosely that I should find it worth while to make a *post mortem* examination of his body if he died here; for his stomach was a perfect apothecary's store, full of every available drug reputed for curing asthma, both old and new, rational and fashionable, costly and cheap, and that if he made a will, he would leave his stomach to me, that I might enrich my dispensary with its medicinal store. Under such circumstances any plan of treatment that holds out a reasonable hope of success in treating asthma cases is worthy of trial.

I must admit that my remarks are based on the successful termination of only three cases which had been under my treatment for a long time. Other cases which I have had to treat have not either undergone treatment for sufficiently long a time or have not been seen by me after the treatment was over, and consequently I am unable to say whether any permanent benefit resulted or not.

In the text-books, arsenic is mentioned along with quinine, iron, &c. as a valuable tonic in asthma, and if it has been used as such, it has probably been used in smaller doses or for a shorter time than is actually required to produce the desired effect of a complete cure.

I now give brief particulars of my first case:—Pandit B. a district engineer, aged about 40, had been suffering for the last two years from reflex asthma of gastric origin. In the beginning, the fits occurred on an average once a month, the patient enjoying good health in the intervals. Gradually the severity, duration and frequency of the fits increased to such an extent, that he was seldom free from cough and shortness of breath. He could not lie down after four o'clock in the morning owing to dyspnoea. He had to sit propped up till 8 o'clock, coughing and struggling for breath. Occasional exacerbations were added to these daily complaints brought on by and irregularity in meals and constipation, to which he was subject. He was under my treatment throughout, except for a few days, when, dissatisfied with my treatment, he tried some homoeopathic and Unani medicines, which he soon left off not finding in them the ready relief which my medicines always gave him in times of distress. His case went from bad to worse, till at last oedema of face appeared with constant dyspnoea. His urine was at this stage of a low specific gravity 1010° and contained albumen. I was rather alarmed, and strongly recommended a change of climate to which he did not consent.

It was about the middle of May 1893 when reading the *Lancet*, I came across an article in which liq. arsenicalis in ten drop doses twice a day at least for six weeks, along with dilute hydrochloric acid and nux vomica, in the morning, was recommended as almost a specific for asthma, I at once put my patient under this treatment, prescribing for him:—

| | |
|-------------------------|-----|
| R Acid Hydrochloric Dil | ℥x. |
| Tinct. Nucis Vomicae | ℥x. |
| Aque | ℥i. |

To be taken early in the morning.

| | |
|--------------------|------|
| R Liq. Arsenicalis | ℥x. |
| Spt. ammon : arom. | ℥xv. |
| Aque | ℥i. |

Twice a day, immediately after meals.

Improvement set in after two weeks, and after four weeks watering and redness of the eyes and itching of the lids, were complained of. I stopped the arsenic for a week and then recommenced it and gave it for two weeks more, thus making full six weeks as recommended in the *Lancet*. Within two months of the date of commencing treatment by arsenic my patient was an altered man altogether. Since then he has been enjoying perfect health. More than 18 months have now passed and he is quite free from all his old complaints and has never had a fit of asthma of any degree whatsoever. I may here remark that I had previously tried hydrochloric acid and nuxvomica in this patient for a long time without any benefit. The result must therefore be attributed to the arsenic alone.

Emboldened by this result, I tried the same treatment on the wife of my dispensary clerk, who had been under my treatment for over a month without any improvement. Six weeks sufficed to cure her, and she has not had any fits for the last sixteen months.

A month later another respectable woman was placed under my care. She had asthma of six years' duration. There was much difficulty in treating this case. Gastric irritability very often came on, requiring stoppage of the arsenic every fourth or fifth day. However, off and on, arsenic was given for six weeks as above detailed. Result perfect cure. No fits, and no cough for the last fourteen months.

In the last two cases fits of asthma came on an average every fortnight.

I wished to allow sufficient time to elapse before sending these notes for publication.

A MIRROR OF PRACTICE.

SCALP INJURY, FOLLOWED BY SYMPTOMS OF CEREBRAL PRESSURE: RECOVERY WITHOUT OPERATION.

By JOHN E. PANIOTY, L.R.C.P. Lond., L.R.C.S. Edin.

Resident Surgeon, Chandney Hospital, Calcutta.

W. B., a Eurasian lad aged 8 years, came with his mother to the out-door dispensary of the Chandney Hospital on the 26th November 1894 at about 10 A.M. His mother stated that last Friday, three days ago, a big boy hit him with an earthen tile on the head. There was some bleeding which she stopped by applying burnt rags. On Sunday, the 25th, the boy went with his father to the Entally Convent, and on their return home he got fever and passed a restless night. The next morning his face and head swelled a good deal.

When seen by me on the morning of the 26th, there was a lacerated wound on the right side of the head, about $3\frac{1}{2}$ inches above the inner third of the eyebrow, measuring $\frac{1}{2}$ inch by $\frac{1}{2}$ inch by $\frac{1}{2}$ inch. The bone was not exposed, and the forehead was swollen to the nasal bones. Healthy pus oozed from the wound. The pupils were normal, and responded to light. There were no signs of cerebral pressure. The boy had fever, 101°F . I advised the mother to take him to the Medical College Hospital, as I thought the injury a severe one, and I could not admit him to the Chandney Hospital, which is for natives only.

The mother did not do so, and the wound was antiseptically dressed. Next morning the swelling had completely gone down; the fever was much less, and the boy felt better.

On the 28th the mother told me the boy had had two fits at home, lasting for about two hours each time. He became insensible during the fit, but when he regained consciousness he talked and recognised every one. On the evening of the 28th November he walked with his sister to the dispensary, a distance of about $\frac{1}{2}$ of a mile, to be dressed. While waiting he had a fit at 6 P.M. and was in it till $7\frac{1}{2}$ P.M. He groaned and then became unconscious; there was foaming at the mouth and a turning up of the eyes. The muscles of the face and the right arm worked convulsively; the pupils were normal. Any pressure on the wound or on any part of the forehead excited immediate twitchings of the facial muscles. The wound appeared healthy. The boy never suffered from fits before the injury, nor is there any history of fits in his family. At the commencement of the fit he could be roused, but quickly relapsed into unconsciousness. Fearing the worst results, I sent for his mother and advised her to take the child to the Medical College Hospital, as operative measures, such as trephining, might become necessary, but she would not do so. I sent the boy home in a palkee, and advised the parents to apply ice to the head and keep him quiet in bed. I gave him a dose of stimulant mixture and prescribed the following:—
Spts. ammoniac aromat. ℥ 4, potassii bromidi grs. 2, aquæ ad. 3ij. every four hours.

On the 29th November the swelling had subsided, but the parts surrounding the wound were tender to touch, and the wound was healing healthily. The pupils were normal and acted to light; the pulse 70 and soft; there were no twitchings of the muscles nor any mental excitement. There were no signs of paralysis of any kind; the boy's memory was clear and he remembered of all that took place before or after the fits, but he had no recollection of having had any fits, nor had he warning of any kind that the fit was coming on. The same mixture was continued with the doses doubled.

On the 28th December the boy had four fits; on the 29th three fits; on the 30th and 31st two fits; and on the 1st, 2nd and 3rd December one fit each day, after which they ceased altogether. The febrile symptoms subsided on the 29th December. There was no sign of sepsis in the wound, and there was no external swelling or puffiness, except the day following the injury. In eight days the wound healed thoroughly, and the boy has been quite well since.

Remarks.—This case is remarkable for the absence of external signs to account for the very evident intracranial mischief. That the fits were due to cerebral irritation there can be no doubt, and the only explanation I would offer is, that commencing meningeal congestion, giving rise to grave manifestations, was suddenly cut short by early rendering the wound aseptic and ensuring the physiological equilibrium of the inter and extra cranial circulation by calmatives, such as ice, bromides, and notably rest. This case proves the great value and effectiveness of out-door dispensaries in affording timely relief, if only the sufferer is regular in attendance and faithful in carrying out instructions.

A CASE OF PNEUMONIA COMPLICATED BY A SINGLE AORTIC ENDOCARDIAL ABSCESS; WITH CLINICAL AND POST-MORTEM REPORTS.

By MANMATHANATH CHATTERJEE, M.B., Cal.

Senior House Surgeon, Mayo Hospital, Calcutta.

SITA NATH, a Hindoo male aged 22, was admitted into the Mayo Hospital, on the 6th November last, for the treatment of pneumonia.

History.—The patient states that eight days ago he exposed himself one night and got a chill. The next morning he had a severe attack of fever ushered in with a rigor. A cough soon followed the fever, with severe pain in the left chest. These symptoms continued unabated for seven days, when he sought admission into the Mayo Hospital.

Condition on Admission. The patient is rather sparsely built. There is an anxious look in his face; his lips are slightly cyanosed, and the tongue is coated with white fur. Breathing hurried and labored, 36 per minute. On percussion, dullness is found to extend from the mammary line in front to the axilla at the side, and to the spine of the scapula at the back, extending downwards to the base of the left lung. On auscultation, moist *redux* crepitations are heard all over the dull area, and friction sounds over the back of the lungs. There is an increase of vocal resonance over the whole of the affected part of the left lung. The expectoration is scanty, muco-purulent and sticky. The pulse is 126, soft and frequent. The heart sounds are normal and rhythmical but weak. The bowels are relaxed seven or eight times in 24 hours. Temperature 103.6°F.

Progress and Treatment.—From the nature of the symptoms, it is quite evident that the case is one of pleuro pneumonia. The patient was therefore put on the stimulant and expectorant treatment, with counter irritation over the back with liniment of iodine. He rallied with the above treatment. His temperature fell about 2°F and kept on fluctuating from 100° in the morning to 102°, in the evening.

Expectoration increased and became easy, and with it the sounds of the affected lung became moister, and in some places approached the character of gurgling rales. His general condition was much improved, and he felt much better.

On the 16th of November the temperature again rose to 103.2°F with an attack of shivering, but fell next morning to 99°F. On the 17th a peculiar "kick" was felt in the pulse which had become very soft with the fall of the temperature. On examining the heart no bruit was detected at the time, but towards evening a faint bruit was audible over the aortic region, which became very well marked the next morning, and was of the character of a loud regurgitant and obstructive murmur, conducted up the carotids and down the sternum. From this day the patient began to get worse, and the heart, which had already been weakened by one terrible ailment, failed, and the patient died on the 19th of November, in spite of the free administration of brandy and liberal nourishment.

I made a *post-mortem* examination of the body five hours after death. There was a thick layer of lymph on the posterior aspect of the left lung which was much enlarged and of a darker color internally. On incision the whole of the left lung was found in the stage of grey hepatization with a large quantity of purulent matter in the bronchioles and air vesicles of the lung. In fact there was the condition described in books as *purulent infiltration* of the lung. The right lung was healthy and quite crepitant. The pericardium was healthy. The heart itself was normal in size and its muscle structure was healthy looking. The right side of the heart—both auricle and ventricle—obtained *anti-mortem* as well as *post-mortem* clots. The endocardium was healthy and shining, and the valves were healthy. The left auricle contained some *anti-mortem* clots, the left ventricle also contained some *anti-mortem* clots entangled between the chordæ tendinæ and columnæ carnæ?

There was at the aortic orifice a small growth of the size of a large sized pea, situated between the diverging borders of the two contiguous aortic semi-lunars near their bases. The edges of the growth came a little on to the two valves, but were not adherent to them. The growth, however, came off with slight manipulation and was found to be simply composed of newly laid fibrin. It exposed a small abscess cavity with an irregular surface but with no signs of granulation.

The brain, the liver, the spleen and the kidneys were all healthy, and there was not the slightest trace of any other abscess anywhere.

Remarks.—This case is of clinical and pathological interest from two points of view—

1st.—The diagnosis of the cause of the heart symptoms. It is almost impossible to diagnose in life the *post-mortem* appearances that have been described. The symptoms point to an attack of endocarditis affecting the aortic valves.

2nd.—The pathology of the small abscess in this case is rather interesting, and appears to me to be thus:—A small colony of pus cells being carried by the pulmonary veins into the left side of the heart and thence through the coronary artery, was lodged in the site where the abscess formed. The sudden rise of temperature could, I think, be explained as due to suppuration and bursting of the abscess. It might be urged that if the abscess was due to the carrying of pus cells from the lungs, other abscesses would have formed in the liver, spleen and kidneys, as is the nature with pyæmic abscess. It might be said that the case was one of ulcerative endocarditis; but it should be remembered that there was an entire absence of endocarditis in any other part of the arterial and cardiac system. The completely healthy appearance of the semilunar or mitral valves to which the abscess was so close, and the presence of this affection in more than one place and over the valves especially, which is so characteristic of endocarditis of any form, points more to an abscess than to endocarditis. I might also add that my belief is, that if the patient had survived a few days longer, other abscesses might have developed in other organs. This complication, however, seems to me to be a very rare one.

SUICIDAL THROAT-WOUND, CUTTING DOWN TO THE OESOPHAGUS AND CAUSING LOSS OF SPEECH AND DEGLUTITION: COMPLETE RECOVERY.

By JOSEPH BENJAMIN, C.M.S.

Ahmedabad.

WHILE I was in charge of the Taluka Dispensary at Parant, CHULAJI BHAIJI, a Hindu male, *et. 55*, was sent to me by the Police the on 2nd September 1891, for the treatment of an incised wound of the throat, about three inches long, one inch wide, and about the same in depth, directed transversely from the left to the right. The windpipe was found divided almost completely below the pomum Adami, only a slight portion remaining undivided at the back. Bubbles of air were passing out of the upper opening of the wounded larynx. The patient was unable to speak or to swallow anything. On admission there was no hemorrhage from the wound. There was a free discharge of thick mucus from the lower opening in the larynx. The large vessels of the neck were unhurt. The patient was prostrated but conscious; he had slight fever, and his pulse was weak. He had cut his throat with a knife after killing his nephew by stabbing him with the same weapon, as he suspected him to be in illicit intercourse with his wife.

Treatment.—The wound was cleaned and stitched at the sides only. A tracheotomy tube was passed into the lower opening of the injured windpipe and secured by means of a tape, to prevent the accumulation of the thick mucus which troubled his breathing. Carbolic dressing was applied to the wound and an aperture left in the dressings for the ingress of air into the windpipe. The head was kept bent downwards and forwards by means of a bandage to the chest and head, and the patient was fed with a stomach pump tube.

7th November.—During the patient's stay in hospital he had slight fever for the first few days, became excited and boisterous, and had to be restrained by force to keep his hands off himself. He was bandaged, as it was feared he might put an end to his life. As the fever subsided he quieted down, and his further progress was uneventful. The tracheotomy tube was removed on the fourth day and the wounds in the trachea and oesophagus healed within another fortnight. On the second day after removing the tube, the patient quite recovered his voice and the powers of speech and deglutition. He became somewhat emaciated from diarrhoea, but with careful dieting, he soon recovered his wonted health and strength. He was discharged perfectly well on the 7th November.

A CASE OF ABSCESS OF THE LIVER, TREATED BY TWO ASPIRATIONS AND THEN BY FREE INCISION AND DRAINAGE: RECOVERY.

By SURGEON-CAPTAIN C. W. R. HEALEY, A. M. S.
*Medical Officer in charge, of Cantonment General
Hospital, Lucknow.*

[REPORTED BY MAULA BUKSH, M. H. A.]

KALLOO, *et. 40*, Mussulman male, was admitted into the Cantonment General Hospital on the 23rd July 1894, complaining of a daily rise of temperature and pain over

the hepatic region. He had been suffering for five months, and was much debilitated and had lost flesh considerably. On examination a swelling was detected on the right side, extending from below the costal arch to the middle-line. It was tender to pressure and quite fixed. The tongue was coated and foul; there was loss of appetite and the bowels were constipated.

There was an evening rise and a morning fall of temperature daily. A hypodermic needle was inserted into the swelling and a small quantity of yellow pus withdrawn. Deslfoy's aspirator was now employed and 14 ounces of yellow pus, slightly blood-tinged, was removed, and the abscess cavity was thoroughly washed out with a warm 5 per cent. solution of boric acid. An antiseptic pad was placed over the puncture made by the needle, and a tight bandage applied round the body. Next day the temperature was normal and remained so for a few days, the patient feeling a good deal better and suffering much less pain. He was given a . . . and kept in bed on fluid diet. The sac however began gradually to fill again; the temperature rising every evening from 101 to 102°, and the patient complaining of considerable pain over the hepatic region. He was again aspirated and the sac thoroughly washed out. This time the pus was less in amount (5 ounces) very thick and of a brick-dust color. The relief was only temporary, for the temperature began to rise again, and he suffered from very profuse sweating. He was now placed under chloroform, and an incision was made over the sac of the abscess. This was gradually deepened, and finally by means of the finger, the abscess cavity was reached deep down in the liver substance. It was thoroughly washed out, and a drainage tube, about the diameter of the little finger, was inserted down to the bottom of the cavity. The wound . . . dressed twice daily and soon began to shew signs that the cavity was contracting. After this he convalesced rapidly and was discharged quite well on the 25th September, about a month after the operation.

CHLORIDE OF CALCIUM IN THE TREATMENT OF ACUTE PNEUMONIA.

DR. A. CROMBIE in the *Indian Medical Gazette* calls attention to the value of chloride of calcium in pneumonia. DR. M. MOIR, of the Indian Medical Service, confirms this opinion of its value in an article in *The Practitioner*. DR. CROMBIE believes that in lobar pneumonia . . . of calcium reduces the temperature and keeps it within safe or normal limits, in spite of the continuance of physical signs; (2) that there is a tendency for the morbid process to be arrested at whatever stage the drug is given in efficient doses, and that the course of the disease is thus shortened or rendered milder; (3) that there is a singular freedom from all anxiety, distress, and danger, a freedom not usually associated with continuous high temperatures; (4) and that there is a corresponding reduction in mortality.

DR. MOIR reports two cases in which the symptoms were alleviated by the administration of this drug. He gave it in doses of from sixty to ninety grains daily (ten or fifteen grains every four hours).

Many drugs have a reputed value in pneumonia, but none are yet accepted as in any sense standard remedies in the disease.

The evidence in favor of chloride of calcium is sufficient to demand for it some attention, and we can only trust that further experience will show that the drug is additionally useful.



Yours sincerely
S. B. Partridge

OUR PICTURE GALLERY.

SAMUEL BOWEN PARTRIDGE, C.I.E.,

F.R.C.S. Eng., F.R.C.S. Edin., F.K.C. Lond., F.O.U.

Deputy Surgeon-General, Indian Medical Service.

THE patriarchal bust which adorns our PICTURE GALLERY, outtrays a personality which either as a professional genius or as a kind and noble-hearted gentleman, is seldom equalled but never surpassed in those qualities of head and heart that make a man loved and revered such a man was SAMUEL BOWEN PARTRIDGE. He was born in 1828 and was educated at King's College, London. He studied medicine at King's College Hospital, where his natural talents and ability, aided by the well-known teachers of that famous school, gained for him a high place in the examinations of the Royal College of Surgeons in 1850. He entered the Honorable East India Company's Indian Medical Service as an Assistant Surgeon in 1852, and immediately upon his arrival in Calcutta he was sent to the field of war in Burma, where he served throughout the long months of that weary and burdensome campaign, for which he obtained a medal. In 1853 he served for a few months as Surgeon to the Loodiana Regiment, and then as Civil Surgeon of Midnapore. While here, he was deputed to accompany SIR FREDERICK HALLIDAY, the first Lieutenant-Governor of Bengal, as his personal Surgeon, in a tour through Tirhoot. In 1855 he was appointed Professor of Materia Medica in the Calcutta Medical College, but the threatening and troublous times of the mutiny caused him to be sent to Oudh, where he was placed in medical charge of the 2nd Oudh Irregular Cavalry at Lucknow. Throughout this arduous and eventful campaign he faced all the fiery trials and rigorous difficulties that were shared in equal measure by the officers and staff and by the rank and file of our Army. He was one of the beleaguered garrison in the Residency with SIR HENRY LAWRENCE and his brave comrades, shoulder to shoulder with his renowned colleague and friend—JOSEPH FAYRE—and many other heroic Surgeons who fell in that ably defended but flimsy shelter, holding their own against unnumbered odds and in the face of indescribable dangers and difficulties. When relief came and SIR COLIN CAMPBELL's brave little army freed the beleaguered garrison, PARTRIDGE accompanied the main troops and was present at the fierce engagements of the storming of Alum Bagh, Cawnpore, Fattahghur, Kalandi, and the siege and capture of the city of Lucknow in 1858. For his excellent services throughout the Indian Mutiny he was honorably mentioned in the military despatches and obtained a medal and two clasps, besides special promotion to a Brevet Surgeoncy. His brief connection with the chair of Materia Medica at the Calcutta Medical College, had already won for him a name as a teacher, and at the close of the Mutiny, he was appointed Professor of Anatomy at the College and Second Surgeon to the Calcutta Medical College Hospital. This nomination gave full scope to his natural abilities. His forte was Anatomy and Surgery, but he was recognised as an "all round good man," for he could fit himself aptly and creditably into any "chair." Hence he sometimes "officiated" in the chair of Chemistry and Physics, at other times he

gave lectures in Botany and Pathology, while for some time he lectured in Medicine and filled the office of the Principal of the Medical College. On the retirement of SIR JOSEPH FAYRE he was promoted to the First Surgeoncy of the College Hospital and to the Professorship of Surgery in the Calcutta Medical College. He was also appointed Consulting Surgeon to the Howrah General Hospital, and, like most men of his excellent service, he filled a plurality of offices at one and the same time, for he was also Medical Inspector of Indian Emigrants, Examiner in Anatomy and Surgery to the Calcutta University, President of the Faculty of Medicine in the University, and Vice-President of the Asiatic Society of Bengal, besides having an extensive consulting surgical practice.

On the 1st January 1880, DR. PARTRIDGE retired from India after 27 years' service, 21 of which were spent in building up the great educational reputation of the Medical College of Bengal. In attempting to describe his work and worth we cannot do better than place on record the sincere and well-deserved eulogium of Dr. J. M. COATES, who was then Principal of the Calcutta Medical College, as found in his Report on the 25th Session of the College, in these terms:—

"PROFESSOR S. B. PARTRIDGE was a truly great surgeon, yet so humble and unobtrusive, that it was only those in actual contact with him who knew and felt his value. A short acquaintance with his genial, loving nature, quickly induced an unbounded regard, and the mature, almost faultless judgment, felicitous expression, fertile resource and quick decision, compelled an unlimited admiration.

"Had this accomplished surgeon but published his own surgical work and the experience he acquired in so large a field, both in war and peace, and especially in our hospital, the world would have known how great a surgeon was amongst us.

"His service began with the 2nd Burmese war in 1852. In the mutiny he was in the centre of the fiercest of the struggles of that terrible time, the Residency of Lucknow, the retaking of Cawnpore, Kalandi, Fattahghur and the final siege and capture of Lucknow. During the greater part of this campaign he served as Field Surgeon with the Head-Quarters of the Army.

"But it was his long connexion, extending over one and twenty years, with this College and Hospital that has left his impress on us and endeared him to our College alumni.

"One of his pupils told me that listening to DR. PARTRIDGE's lecture was the most delightful of his enjoyments—so complete yet so concise, so clearly reasoned and yet so pleasingly presented, that the knowledge and the pleasure strove for supremacy.

"And what an operator! The eagle's eye, the lion's heart, and the lady's hand could not have been more fitly combined nor better illustrated. The present generation of surgical students and practitioners must pass away from Bengal ere DR. PARTRIDGE's influence and teaching shall cease to have its effect on the people of this part of India.

"I will not give up the hope that Government may yet honor one so gifted and useful as our late colleague. There is not a man of our service who would not feel that we were all honored by such a recognition of DR. PARTRIDGE's service."

These are the expressions of a man who himself was an honored teacher, a skilled administrator, an able physician, and a generous and true hearted friend, a man loved and respected in his retirement, as was the grand subject of his well-merited and enthusiastic praise.

be ascertained by *post-mortem* or experimental examinations, for which in India there is abundant material. Good dissections of the lymphatics in filarial disease are therefore still a desideratum. It would be well to warn intending investigators of the fact that the filaria is not usually found in the blood or tissues in developed elephantiasis. It would appear that the development of the disease brings about in some way the destruction of the parasite which produced it. In the treatment of filariasis MAITLAND has recently advocated the excision of filarial glands.

GUINEA WORM

Tox is a subject which demands investigation, and one which, though energetically pursued by medical men in India in earlier times, has been virtually abandoned by the present generation of Indian medical men.

OF DYSENTERY, LIVER ABSCESS AND AMOEBA COLI

Our views are vague, various, and uncertain; admitting, as we must, the inter-relationship of liver abscess and dysentery, but remembering that liver abscess rarely accompanies or follows dysentery in cold climates, that it is more common in connection with the dysentery of certain districts in warm climates than in connection with that of other districts, and that it appears more frequently in certain epidemics of dysentery than in others, the question arises: Are not these apparent anomalies to be explained by the supposition that there are several kinds or species of dysentery, all of which are not etiologically in relationship with liver abscess? There is surely some false doctrine as well as much confusion of ideas at the bottom of the classification of liver abscesses into single abscess, which is designated tropical, and multiple abscess which is designated dysenteric, secondary pyemic abscess. Both forms occur in the tropics, occur in connection with dysentery, and both are microscopically identical in physical characters. A nomenclature, which implies pathological differences as existing between these various merely numerically different forms of abscess should be expunged, until it is proved that there is a real difference. The amoeba coli is a parasite which all physicians in India ought to make themselves practically familiar with. It is found in dysenteric discharges and in the pus of liver abscess. COUNCILMAN, LAFLER and OSLER regard this organism as the specific cause of a particular type of dysentery, and also as a cause of liver abscess. LEWIS and CUNNINGHAM declared against the pathogenic qualities of amoeba coli for the reason that the same or a similar organism is frequently found in healthy conditions of the alimentary canal. But under such conditions as catarrhal inflammation of the bowels or ulceration of the bowel, may not the amoeba attack weakened tissue and give rise to complications and dangers?

BERI-BERI.

All the more important recent advances in this subject we owe to foreigners or to our own countrymen working in many different places, but not in India. Very little has been said in recent years about the distribution of beri-beri in India. The disease is seen in London among the lascars crews of ships coming from Bombay. It is presumed therefore that the disease is endemic in Bombay; and if in Bombay, probably elsewhere in India, where we find

in most respects those conditions of climate and insanitation which in Japan, in China, in Brazil, in Africa, in the West Indies and in the Malay Archipelago give rise to this very dangerous disease.

ANKYLOSTOMIASIS.

A vast amount of sickness among the coolies on tea plantations and among the natives of certain villages in Assam and in Ceylon has been caused by the ankylostomum duodenale. Doubtless much of the anæmia, so prevalent among natives, is attributable to this parasite; and the general appreciation by the profession of this fact, a knowledge of the methods of diagnosing the presence of the parasite in the alimentary canal, and of the use of thymol as a remedy, will save many a life and much invaliding and suffering. DOBSON'S investigations have shown not only that the ankylostomum is widely distributed throughout India, but that several other species of entozoa which were formerly looked upon merely as varieties and helminthological curiosities are by no means uncommon.

CHRONIC INTESTINAL FLUX.

Forms of this are exceedingly common, particularly in Europeans in India, as in all hot countries. They are of different kinds and acknowledge different causes, *e. g.* chronic dysentery, visits to cooler health resorts constituting "hill diarrhoea," chronic diarrhoea associated with relapsing catarrhal inflammation "characterised by sore-mouth, pale fermenting loose massive stools which, if not corrected, early terminates in chronic physiological starvation and ultimately in death. Then we have "morning diarrhoea" which, judging from the peculiar acrid bilious nature of the stools, seems to be caused by sudden and excessive hepatic activity; diarrhoea dependent on portal congestion, and other fluxes, all of which should be studied, distinctly separated, and defined.

TYPHOID FEVER.

The separation of typhoid fever from the malarial group is one of the best pieces of work which of late years is to be credited to the profession in India. There is only one point of interest that can be here referred to, *viz.*, that the typhoid germ in India may have a somewhat different history from what it has in England. Typhoid in England does not often, if ever, arise *de novo*. Epidemics of typhoid in England generally succeed, and can almost invariably be traced to the arrival of a case of the disease in the district subsequently affected. It is as if the typhoid germ, although able to live for a time, must be resuscitated, so to speak, by passing occasionally through the human body, but in certain warm climates the germ of typhoid is a native of the soil, and needs no periodical resuscitation in the human body to confer on it pathogenic properties, or to keep it in existence as a species. If this view be correct, the sanitary measures at present in vogue are inefficient.

CHOLERA.

There is no possible excuse for hesitation for accepting the dogma that in India as in Europe cholera is a filthy disease, carried by dirty people to dirty places; that its common mode of access to the interiors of these people

is by the water which they drink, and that it may properly be described as a water-borne disease, by which is meant that it is caused by a poison which is swallowed and which in ninety-nine cases out of a hundred is carried to the mouth in water. In some very rare unproved cases, perhaps where cholera is very rife, and filthy habits are overabundant, it is blown by gusts of wind or carried by the hand into food and swallowed. It is not a mere matter of rivers and watersheds, but of cooking utensils, drinking cups, water-bottles, and especially of cisterns and reservoirs. Inside the body the poison passes, after killing the patient in its passage; outside its course is halting, erratic, various in manner and intensity, depending largely on the physical surroundings in which it finds itself (the soil, the water, the temperature) by which oftentimes it is destroyed, or amid which it dies out. The varied susceptibility of individuals points to varied powers of digesting and thus destroying the contagion.

INDIA'S REAL WANT IS PURE WATER.

The difficulty of meeting it is largely one of expense; and this is no small obstacle. Sanitary efforts then will have to be mainly occupied in endeavouring to keep clean the supply which already exists. The most efficient of the many systems for the purification of the water supplies of great towns is ANDERSON'S Revolving Purifier. There are, of course, conditions other than the provision of pure drinking water to be considered in relation to the pathology and epidemiology of cholera; but, as DR. SOLOMON SMITH has lately pointed out, the production of an epidemic is analogous to the opening of a 'word' lock. As all the letters must be placed in position before the lock could be opened, so many factors must combine before an epidemic of cholera could be caused. We know that one essential cause of cholera one letter to the lock, is the swallowing of the poison; and thus, by a provision of pure water, we are able to break up the combination by which alone an epidemic could be produced.

AN INDIAN SANITARY SERVICE.

To save the Mahomedans from the danger caused by their pilgrimages, to save the world from the danger caused by Mecca, the following steps should be taken:—

1. The Indian Sanitary Services should be organised on the following basis:

(a) An Imperial Sanitary Department attached to the Government of India and distinct from the sanitary department of the Army. It should consist of (1) the Sanitary Commissioner with the Government of India, (2) a Deputy Sanitary Commissioner, (3) a medical Statist, (4) a Veterinary Commissioner, (5) a Sanitary Engineer, (6) a Minister of Health having a seat in the Viceroy's Council, as President. There should be a laboratory with trained experts.

(b) A Provincial Sanitary Department attached to each of the provincial governments and consisting of (1) Sanitary Commissioner, (2) Assistant Sanitary Commissioner, (3) Sanitary Engineer, (4) a President who should be a high officer in the Civil Service; also travelling agents and scientific agents.

(c) A local sanitary department attached to each Municipality, District Board, &c., and consisting of Municipal Commissioners or District Magistrates with Civil

Surgeon when obtainable. Executive agents: A Health Officer attached to one or more towns; an Engineer in a similar position, and a sanitary staff for each place as required.

2. A complete sanitary regulation of all Indian fairs should be undertaken.

3. A rigid system of medical inspection of all pilgrims should be instituted at the ports from which they start, the sick being detained, and the healthy alone being allowed to proceed.

4. The medical inspection at Karaman should be so conducted as to secure its complete efficiency. Qualified medical women, and if possible, Mahomedan women doctors, being among the inspectors.

5. At Jeddah the sick would again be wooded out.

6. The sanitation of Mecca should be thoroughly reorganised under the auspices of the Turkish Government. The "water-supply" inspected and protected, and the poison well Lemzem cleaned and provided with a larger supply and a continual change of water.

7. A complete system of conservancy should be carried out during the time of the pilgrimage, all refuse immediately removed and sick promptly isolated.

TROPICAL RESEARCH.

Until not very long ago, all that was best and most valuable in the science and practice of tropical medicine was almost entirely of English creation, but it is now an ugly fact that in tropical pathology, in the investigation of tropical disease, and in tropical medical literature, we are decidedly on the wane; and England with her unbounded opportunities is not *facile princeps* in tropical medicine. The Englishman displays unlimited courage and devotion to duty when a pestilence breaks out in a colony, but leaves the scientific part of the work, the pathological investigation, to Japanese, French, Germans and other outsiders.

RESEARCH IS NOT ADEQUATELY ENCOURAGED IN INDIA.

There are several obstacles to the successful cultivation of medical research in India. (1) It is not officially encouraged. In fact the younger and more scientifically ambitious medical officers in India feel that those who trouble officialdom for the investigation of any new scientific facts that may occur to them are regarded as nuisances; and as promotion, as a rule, depends on seniority, on avoiding giving trouble at head-quarters, and on respectable conservatism, the pathologist is out at elbows and is nobody, while the diplomatic senior officer has all the plums. (2) The time of medical officers is taken up by an amount of unnecessary clerical work being imposed on them. (3) The want of regular instruction in tropical diseases in English medical schools. English medical practitioners, excepting those who have had the privilege of passing through Netley, begin their practice in the tropics with no knowledge of tropical diseases, so that by the time they have passed the years necessary to be familiar enough with the subject and to be in a position to add anything to the common stock of knowledge about it, the energy and enthusiasm of youth have passed and their career in the tropics is about over. (4) While the combatant officer goes home at the public charge and to an appropriate and well-furnished school

to keep himself abreast of the times in guns and torpedoes, a medical officer has to go home at his own expense and to pay for his attendance at some hospital or laboratory if he wishes to brush up his knowledge of life-saving machinery.

The suggestions made with a view to remedy the foregoing defects are :—

(1). To make promotion in the medical services, in greater measure than at present, a reward for medical merit.

(2). To give at the public expense to deserving and suitable medical men an opportunity to return occasionally to Europe for a year or two to brush themselves up in medical matters and to familiarise themselves with new methods.

(3). To have less clerical and more medical work in the services.

(4). To have the examining and graduating bodies in Britain to give at least one question in their examination papers in medicine on a tropical disease.

(5). To have the large hospitals in Liverpool and London in which tropical diseases most abound, affiliated with the local hospital medical schools in some way.

THE REPRESENTATIONS OF THE INDIAN MEDICAL ASSOCIATION TO GOVERNMENT, ON THE GRIEVANCES OF CIVIL ASSISTANT SURGEONS AND CIVIL HOSPITAL ASSISTANTS.

IN compliance with the notices issued, the third meeting of the Council of the Indian Medical Association was held at its Library on the 24th January. Present, DR. LAL MADHUB MOOKERJI, in the chair, DR. K. G. SIRCAR, J. G. ANDERSON, MONKEY LAL DUTT, H. C. HODGKINS and J. R. WALLACE. After reading and confirming the Minutes of the 2nd meeting of the Council and of the First Annual General Meeting of the Association and after duly electing the twenty-nine members who had applied since the Council's last meeting to become members of the Association, the report of the President and Secretary and the letters relative thereto, on the subject of representing to Government the grievances of Civil Assistant Surgeons and Civil Hospital Assistants, were considered, the letters were passed, and signed by the Council and were formally sent to the authorities on the 29th January 1895, in the following form :—

To

Surgeon Major-General

W. R. RICE, M.D., C.S.I.,

Surgeon-General with the Government of India.

Sir,

WE have the honor, on behalf of the Indian Medical Association, and of the parties concerned, to lay before you the following representation of the grievances of Assistant Surgeons of the Civil Medical Department of the Presidential and Provincial administrations under your command.

1. That though the standard of qualifications of Civil Assistant Surgeons, both classical and professional, has been greatly enhanced and their duties and responsibilities

heavily augmented since the formation of this service in 1841, the status, salary, prospects and pension are the same to-day as they were 50 years ago. That as compared with other State services locally recruited, such as the Judicial, Engineering, Educational, Revenue, Administration, etc., an Indian or Anglo-Indian Subordinate of inferior academic qualifications than an Assistant Surgeon, has the prospect of rising to the highest position in the service to which he belongs, while the emoluments of these various locally recruited State services, when compared with the emoluments of Assistant Surgeons, are a cause for serious dissatisfaction, and become a grievance of a very marked character indeed.

The fact that an Assistant Surgeon's maximum salary is Rs. 200, that his travelling and officiating allowances are out of all proportion to the expenses necessary for the up-keep of his position, and that his professional work and worth find a most unsuitable recompense when compared not only with his own compeers in other subordinate services, but also when compared with junior medical practitioners having inferior qualifications, exhibits a strange and disparaging anomaly. It is important in this connection to point out that the work of Assistant Surgeons in the medical charge of districts, civil hospitals and dispensaries, as well as jails, and the supervision of vaccination and rural sanitation, is admittedly large and onerous.

As a case in point for comparison of two subordinate services, it may be stated that a First Grade Assistant Surgeon is paid a fourth of the salary of a Deputy Magistrate. These two subordinate services, when first created, were on the same footing with regard to pay and prospects. At the present time the Subordinate Deputy Magistrate, of 14 years' service, draws a salary of Rs. 800, while the Assistant Surgeon of 14 years' service draws only Rs. 200. It is argued in connection with the small salary paid to Assistant Surgeons that they are allowed private practice. It is admitted on all sides, however, that the work of these subordinate officers is so burdensome that they have little or no time for private practice, so that their added remuneration from this supposed source of income in no way represents adequate emoluments, while the ever-increasing additions of qualified practitioners to the field of private practice, makes the prospect of an income from such a source still more diminutive.

It is maintained that their impecuniosity has greatly handicapped their social status, rendering their condition both socially and pecuniarily one of great hardship.

2. That with regard to prospects, though Assistant Surgeons are eligible for promotion to the Unconvenanted or higher Civil Medical Service, they are not so promoted. There is therefore no avenue or prospect of promotion open to the Assistant Surgeon beyond the three grades of his own service, which terminate with a maximum salary of Rs. 200, with no other title or rank than that of Assistant Surgeon and a pension of Rs. 100 after 30 years of laborious work.

3. With regard to status, it is felt, that when compared with other subordinate services, the position of an Assistant Surgeon is very ill-defined, that he is subjected to the restrictions of the Arms Act which does not affect his

compeers in similar subordinate services, and that in such State establishments as Levees, Durbars, etc., he is without any definite status, and that the absence of some official recognition of his position, tends to degrade him and his class socially among his countrymen.

We have carefully considered the voluminous statements of the grievances of Civil Assistant Surgeons as published by them in the *Indian Medical Record*, the organ of the Association and of the local profession, but we feel that the lengthy correspondence referred to, resolves itself into the points raised in this communication, and we do not desire to trespass too much upon the time and patience of the Indian Government.

With this brief statement of the grievances of Assistant Surgeons, the Council of the Indian Medical Association, as representing the local profession of this country, desires most respectfully with a view of offering such help as it may towards the settlement of this important problem, to offer the following suggestions for the kind and gracious consideration of the Government of India, viz :—

I. That Civil Assistant Surgeons be designated Assistant Civil Surgeons and that their service be merged into the present Uncovenanted Medical Service under the title of the *Indian Civil Medical Service*.

II. That such service be graded as follows :—

(a). Civil Surgeons (as at present graded in the Uncovenanted Medical Service).

(b). Senior Assistant Civil Surgeons. A new grade, promotion to which will be made after 20 years' service, for special merit.

(c) First Grade Assistant Civil Surgeon.

(d) Second Grade " "

(e) Third Grade " "

3. That the grades, salary and pension be arranged as follows :—

Tabular Statement showing Grades, duration of Service, Salary and Pension in such Grade, together with Allowances of the Indian Civil Medical Service.

| GRADERS OF (J. C. M. S.) | Service for Grade. | Salary | Pension | Allowances. |
|-------------------------------------------|-----------------------|--------|---------|-----------------------------------------------------------------------|
| 1. Civil Surgeon* | | Rs. | Rs. | * |
| 2. Senior Assistant Civil Surgeon. | (Special) | 500 | 250 | The same as Civil Surgeons |
| 3. First Grade Assistant Civil Surgeon | 25 years | 400 | 200 | (U.C.M.S.) when in officiating charge. |
| 4. Second ditto. | 20 " | 350 | 175 | Grade allowances same as the Subor- dinate Judicial Service. |
| 5. Third ditto. | 15 " | 300 | 150 | |
| | 10 " | 250 | | |
| | 5 " | 200 | | |
| | | 150 | | |

* Or present Uncovenanted Civil Medical Service, as it stands.

Having respectfully submitted the foregoing suggestions regarding change of service and grade designation, for better prospects in regard to promotion, pay, travelling and other allowances and pension, it now remains to mention the subject of official status.

In this matter we feel that the justice and merits of the case would be suitably met by according to the Assistant Surgeon class, the same public status as is at present recognised for the Subordinate Judicial Service.

In conclusion, we would most respectfully beg your

generous consideration and support of this communication, as we feel that your recommendations for the amelioration of the grievances of Civil Assistant Surgeons will tend not only to the contentment and gratification of a large and worthy section of State servants, but will be the means of signal encouragement to medical education and progress in our Indian medical schools and colleges.

We have the honor to be

SIR,

Your most obedient servants

Lal Madhub Mookerjee, Rai Bahadur, L.M.S., F.O.U.,

President.

E. W. Chambers, L.M.S., L.S.A. Lond. and F.S.C.S. Lond.

Vice-President.

K. G. Sircar, M.B., L.R.C.P. Edin.

Money Lal Dutt, M.R.C.P. Lond.

J. G. Anderson, G.M.C.B.

H. W. Jones, M.D., M.R.C.S., Lond.

H. C. Hodgkins, *Treasurer.*

James R. Wallace, M.D., *Secretary.*

*Members of
Council.*

To

Surgeon Major-General

W. R. RICE, M.D., C.S.I.,

Surgeon-General with the Government of India.

SIR,

On behalf of the Indian Medical Association and of the parties represented, we have carefully considered the disabilities and grievances of the Civil Hospital Assistants in the various Presidential and Provincial administrations under your command.

The representations of these subordinates have been fully made known in the *Indian Medical Record* from time to time during the past five years, and it is with a view of respectfully placing a brief statement of their disadvantages and difficulties before you and of soliciting your generous help for their amelioration, that the Council desire to, approach you with this representation.

Briefly, the grievances of Civil Hospital Assistants may be classed under two heads :—(1) Status, (2). Pay, Allowances and Pension.

1. *Status.*—It is admitted that of recent years the educational and professional training of Civil Hospital Assistants has been greatly improved. They now undergo a full curriculum of four years' medical education, and are recognised officially as qualified practitioners of a subordinate grade. They are ordinarily made to fulfil the duties of assistants to Civil Surgeons, but they are frequently placed in independent charge of small districts, dispensaries and jails, and are largely used in promoting the work of rural sanitation and vaccination. It is felt that in keeping with these onerous duties the title of Hospital Assistant is a misnomer, since the compounders, dressers, and other menial servants of a hospital, are also known as hospital assistants. This appellation serves to keep them low in the social scale, and it is felt that a change of designation to that of Sub-Assistant Surgeon would adequately describe their professional and subordinate position, and at the same time remove a grievance which is the cause of much heart-burning and dissatisfaction.

2. *Pay, Allowances and Pension.*—There are three grades of Civil Hospital Assistants. The lowest receives a salary of Rs. 25 monthly, which, after seven years, constituting the second grade, is raised to Rs. 35; following which is the highest grade, which is entered after fourteen years' service, and has a salary of Rs. 55. The independent charge of dispensaries is attended with an additional ten rupees per mensem.

In comparison with similar subordinate grades in the Public Works Department, Police, Judicial, Revenue Departments, &c., the pay, prospects and general allowances are very meagre indeed; thus a Sub-Overseer in the P. W. D. can rise to be a Sub-Engineer on Rs. 400 per mensem; a sergeant of the native police can rise to be an Inspector on Rs. 200 per mensem; while subordinate clerks in the Sub-Judicial and Sub-Revenue departments, have an avenue of promotions open to them, which yield emoluments varying from three to six hundred rupees per mensem. In none of these subordinate services is the educational and professional training as rigorous as that required for this section of the subordinate medical service. It is felt that a small increase of salary and pension for each grade of Civil Hospital Assistants and the creation of a special senior grade, promotion to which would be made for special merit and qualifications, would fully meet the disadvantages under which they at present labor.

3. *Tabular Statement shewing Grades, duration of Service, Salary and Pension in each grade, together with allowances.*

| GRADE OF SUB-ASSISTANT SURGEONS. | Service for Grade. | Salary | Pension | Allowances. |
|----------------------------------|--------------------|--------|---------|-------------|
| | | Rs. | Rs. | |
| 1. Senior Grade | (Special) | 100 | 50 | |
| 2. First " | 25 years | 80 | 40 | |
| 3. Second " | 20 " | 70 | 35 | |
| 4. Third " | 15 " | 60 | 30 | |
| 5. Fourth " | 10 " | 50 | ... | |
| 6. Fifth " | 5 " | 40 | ... | |
| 7. Sixth " | | 30 | ... | |

We respectfully solicit that the foregoing suggestions may meet with your kind approval and recommendation to the Government of India.

We have the honor to be
Sir
Your most obedient servants,

Lal Madhub Mookerjee, Rai Bahadur, L.M.S., F.C.U.;
President.
E. W. Chambers, L.M.S., L.S.A. Lond., F.S.C.S. Lond.,
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K. G. Sircar, M.B., L.R.C.P. Edin.
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J. G. Anderson, G.M.C.R.,
H. W. Jones, M.D., M.B.C.S. Lond.
H. C. Hodgkins, Treasurer.
James R. Wallace, M.D., Secretary

Members of
Council.

We sincerely trust that the action of the Council will meet with the approbation of the entire Association, and that our friends on whose behalf the Council has moved will heartily appreciate their unanimous and energetic efforts to seek redress for their grievances.

We cordially congratulate the Association on the action it has taken, and we most sincerely hope that success will attend their appeal on behalf of our brethren in these services.

COMMENTS AND NEWS.

A DEATH-BLOW TO MIDWIVES IN ENGLAND.

WE have much pleasure in reproducing in *extenso* the following trenchant article from our estimable contemporary *The Medical Times and Hospital Gazette* of London:—"For some years past this journal has incessantly deprecated the custom, which has, unfortunately, become very widely extended, of the bestowal by qualified medical men, and even by respectable medical bodies, of diplomas in midwifery, to women who are possessed only of the most scanty knowledge and experience of the subject. Moreover, it has fallen within our knowledge that certainly some of these women were altogether destitute of personal character, and that therefore the individual or the society that testified to her professional standing, were bolstering up to the public a most undesirable and sometimes dangerous worker. In consequence of the stand which has been made by medical men on this matter, and notably by DR. RENTOUL, of Liverpool, the General Medical Council last May, it will be remembered, passed a resolution to the effect that such certificates were calculated to deceive the public. Nevertheless, the resolution of the Council was treated with marked contempt by the individuals and societies complained of, because they continued their irregular practices. Now, we are glad to see that the General Medical Council has vindicated its position, and has passed the following resolution upon the advice of its eminent legal advisers.

"(a) That the Council, being of opinion that certain documents issued by various societies or persons as diplomas of education and examination in midwifery are 'colorable imitations' of diplomas conferring a legal right to admission to the Medical Register, and both contravene the spirit of the Medical Acts, and are calculated to deceive the public, hereby give notice that from the present date the issue of such 'colorable imitations' by registered practitioners will be regarded as conduct infamous in a professional respect.

"(b) That in the opinion of the Council, the form of the certificate now before the Council, and purporting to be granted by the Obstetrical Society of London on 20th, July 1894, is such that it may be regarded as a document coming within the purview of the foregoing resolution. And that this opinion be communicated to the President and Council of the Obstetrical Society.

"Probably, never in the whole history of medicine has such a severe and well-deserved public censure been passed upon any medical society, and the present President and Council of the Obstetrical Society of London must surely feel much humiliated. The protests which have been made for years by their medical brethren against the deceptive documents which they have issued to midwives, have passed over their heads unheeded and uncared for; and for the severe condemnation which they have now received from the Parliament of their profession they have therefore only themselves to thank. They may be able—we hope they will—to escape from the awkward position in which they now stand. But it will never be forgotten against them that, in the opinion of the General Medical Council, the President and Council of the Obstetrical Society of London have contravened the spirit of the Medical Acts, have issued documents calculated to deceive the public, and have therefore been guilty of conduct infamous in a professional respect.

"The matter will certainly not rest here, and we presume, therefore, that the President and his colleagues will immediately cease to issue their so-called 'diplomas.' They would be well advised if they immediately and altogether discontinued their midwifery examinations, because the general practitioners of the kingdom will certainly question the

validity of any future certificate which they may issue. We take it for granted therefore that what is termed 'the diploma of the London Obstetrical Society' will now disappear into the limbo of forgotten and discredited things.

"A very considerable blow has therefore been given to the utterly shameful traffic which has been going on in pseudo-midwifery certificates for the last few years, and coincidentally to the pretensions of midwives, after a three months' educational training, to be placed upon the same footing as medical men who have to pass through five years' arduous and expensive training. In these columns we have frequently asserted our belief that midwives are doomed to extinction, and that in the near future they will cease to exist. We have been steadfastly opposing, on behalf not only of general practitioners but also of the public, the proposed legislation for midwives, and we deeply regret that in the professional press we have had, with the exception of the *Provincial Medical Journal* and the *Nursing Record*, to stand almost alone in this matter, the *Lancet* and *British Medical Journal* unfortunately wielding their influence in favor of galvanising into fresh life an altogether obsolete class of workers. Our contemporaries have had their reward, and we are pleased to know that we are receiving ours, because our view of the primary duty of a medical journal is to protect the interests and to expound the views of those whom it has the honor to represent in the public press. We will revert to this matter again, but at the present moment take this opportunity of assuring those whom it may concern that with patient perseverance we shall continue our efforts until the midwife has disappeared from the land, and efficient and well-trained workers have taken her place. We beg to assure the gentlemen who are giving colorable imitations of medical diplomas, conferring a legal right to admission to the Medical Register, that we have in our possession a fairly correct list of their names, and that we have only been waiting for this definite pronouncement from the General Medical Council to take action in the matter. The Incorporated Medical Practitioners' Association, we are informed, will take the necessary measures to prevent any infraction of the Regulation now laid down by the General Medical Council, and we are therefore acting kindly towards those now declared to be guilty of "infamous conduct" in a professional sense in warning them immediately to discontinue the practices which have brought discredit upon themselves and so much harm to the public and their fellow-practitioners."

STRYCHNINE IN SNAKE-BITE.

DR. ELLIOT's paper on strychnine in snake-bite will be read with profound interest everywhere. Unquestionably it must be admitted that the experiments are marked by the greatest care, and are based upon sound scientific principles. The profession in India is under a debt of gratitude to DR. ELLIOT. The difficulties placed in the way of the mafasal practitioner of testing the clinical value of DR. MUELLER's method of treatment are insuperable. DR. ELLIOT insists upon certain indubitable proofs being offered before the strychnine cure can have any reasonable pronouncement of opinion made upon it. We would draw special attention to these points; for without substantial proof of these clinical requirements, all reports of cases of snake-bite will hence forward be received with considerable dubiousness. DR. ELLIOT approached his subject with a prejudice in favor of strychnine, and no one will fail to recognize the honest spirit of his efforts and the honesty of his work and its results. To our mind, while we have always felt disposed to hope that a remedy for snake-bite had been found in DR. MUELLER's method by strychnine, we have had the ever present uncertainty that has forced itself upon our reason and judgment, that the most critical and important evidence as to the SNAKE

AND ITS BITE was shrouded with doubts or supported by the feeblest shreds that could never be accepted as "evidence of fact." Our readers and those who have reported cases of snake-bite must approach this vital subject without bias. If flimsy statements are set aside by "facts" clear as daylight, if a dozen doctors in a laboratory or ONE for a matter of that, can show us a cobra, strung and full of venom, a cobra and nothing but a cobra, and we see that cobra bite an animal and that animal dies from the bite without the aid or intervention of strychnine, and if that same reptile bites another animal immediately after its first victim and this animal is fully treated with strychnine and dies, we can only conclude after such an experiment has been repeated over and over again with similar results, that the drug used is ineffectual in saving life, and as it affects animals, is not an antidote to cobra poison. And we feel sure that the analogy that undoubtedly exists between the lower animals and man, makes the assumption reasonable that cobra poison will not find an antidote in strychnine when applied to the human organism. This is certainly the conclusion that forces itself upon our minds after studying DR. ELLIOT's experiments, and after reading the strong corroborative support given them by the physicians who witnessed his work.

There is just one point which we do not find borne out by DR. ELLIOT's experiments, viz., the comparative difference between the effects of cobra poison injected into an animal by syringe-dosage and by the natural method of snake-bite. What quantity of poison does a cobra impart to its victim? Is it more or less than an experimenter injects with a syringe? If it is less, then the experiments must be repeated and proof be forthcoming that the fatal dose of the snake-bitten animal was the test in every case by the injection method of poisoning.

THE ART OF VENTRILLOQUISM.

M. M. FLATAU and GUTZMANN rob ventriloquism of its sentimental phase by declaring that the illusion of the ventriloquist's voice coming from a different direction to that from which it actually issues is produced by variations of tone and of the resonant accessory cavity, and by the ventriloquist completing the illusion by gazing with an astonished or frightened look in the direction from which he wishes the sound to appear to come. The ABBE DE LA CHAPPELLE in 1772 A.D. declared that the stomach played no part in ventriloquism, which was the result, by habit, of a certain constriction of the throat. RICHERAND attributes this phenomenon to a lowered epiglottis and the scanty escape of air through the glottis, and LESPAGNON ascribed it to a very accentuated elevation of the velum of the palate; but while LISKONUS attributes ventriloquism to inspiration, MAGENDIE terms it a modification of natural sounds, MULLER claims it to be due to expiration through a contracted glottis, and GEOFROY DE SAINT-HILAIRE designates it as *engastrimythismus* produced by the aid of a second rudimentary larynx. FLATAU and GUTZMANN prove that the vibration of the larynx is very feeble, and while the abdominal muscles are stretched, the epigastrium and diaphragm remain in the position of inspiration, the epiglottis is forced backwards, so that the false cords and the cartilaginous portions of the glottis almost touch each other, and the pillars forming a very sharp angle the tension of the velum of the palate greatly increasing to lower the normal intonation a smaller quantity of air is thrown out than in ordinary speaking, and the voice assuming an octave higher than its natural tone so moderates the emitted sound as to make it appear to come from some other direction or person than from where it actually originates.

THE CAUSE OF ENTERIC FEVER AMONG EUROPEAN SOLDIERS.

In order to still further analyse the connection between the prevalence of enteric fever among our European soldiery in India, we have asked for the following information from the Sanitary Commissioner with the Government of India:—

(1.) Statement shewing the number of *European soldiers* attacked with enteric in 1891 and 1892 separately according to age as under—

| | 24 and under. | 25 to 29. | 30 to 34. | 35 and upwards. |
|-------|---------------|-----------|-----------|-----------------|
| 1891. | | | | |
| 1892. | | | | |

(2.) A similar statement for *officers* of the Army in India.

(3.) Statement shewing the number of cases of enteric among soldiers according to *RESIDENCE* in India as below.

| | 1st and 2nd years. | 3 to 5 years. | 6 to 10 years. | 11 and upwards. |
|-------|--------------------|---------------|----------------|-----------------|
| 1891. | | | | |
| 1892. | | | | |

(4.) Similar statement with regard to *officers*.

Statements of the above kind are not in the Sanitary Reports. Like statements are to be found for European soldiers with regard to *mortality* from enteric, but not with regard to cases admitted or attacked.

THE MARRIAGE OF SYPHILITICS.

DR. F. E. MAINE thinks that syphilitics ought *not* to be permitted to marry, as no matter how *apparently cured*, they cannot procreate a vigorous, healthy and noble type of manhood, and no benefit accrues by populating a nation with a weak-minded feeble-bodied humanity. He shows that syphilis may manifest itself at any time between four months and 24 years after the initial chancre, and declaring that so called anti-syphilitic treatment is a delusion, disputes the possibility of syphilitic parents bearing healthy children, and points out that if apparently healthy children born of syphilitic parents be watched to puberty and maturity their blunted intellects, early decay, and weakened bodies all tend to shew the truth of the Bible declaration of the sins of the parents being visited upon the children, even to the third and fourth generation.

THE ABOLITION OF THE C. D. ACT BY PARLIAMENT.

THE following resolution was passed by the British House of Commons, in June 1888:—

"That in the opinion of this House, any mere suspension of measures for the compulsory examination of women and for licensing and regulating prostitution in India, is insufficient, and the legislation which enjoins authorities or permits such measures ought to be repealed."

That legislation stands repealed to-day to the honor of England. May it stand repealed and the ACT be branded as an infamy for all ages.

THE NEED OF A SANITARY SERVICE FOR INDIA.

DR. W. J. SIMPSON's able and timely paper on the need of a sanitary service for India demands the most thoughtful perusal of all medical men and of the public generally. We trust his experience as a sanitary expert will carry considerable weight with the "powers that be," and that antiseptic and energetic action will be taken on the lines indicated by DR. SIMPSON.

His remarks on an outbreak of cholera in Dum-Dum are pregnant with caution to the military authorities, and it is to be hoped the incident so graphically described will arouse the needed enthusiasm to prevent preventable disease by measures that seem so simple and yet so effectual.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:—

John Robert Charles Hall, Asst. Surgeon, I. M. S., New Civil Lines, Lucknow.

B. D. Raghavendra Rao, L.M.S., Asst. Surgeon, Fort, Bangalore.

V. Abboy Naidu, L.M.S., Asst. Surgeon, Lunatic Asylum, Pettah, Bangalore.

V. S. Rajagopal Moodaliar, Hospital Assistant, Lunatic Asylum, Bangalore.

P. Palpu, L.M.S., Asst. Surgeon, Lunatic Asylum, Bangalore.

George Mannas, Hospital Assistant, St. John's Hill, Bangalore.

Robert George Ives, Asst. Surgeon, I. M. S., Station Hospital, Neemuch.

J. T. Parkinson, Asst. Surgeon, I. M. S., Presidency General Hospital, Calcutta.

Abdul Hafeez, Hakim, Hyderabad Medical School, Civil Dispensary, Koilkonda, *via* Janmupet (Deccan).

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

SHORT ITEMS.

In accordance with the rule that Government must be consulted in the matter of fees to medical officers from Native Chiefs, sanction was recently accorded to the acceptance of a fee of Rs. 1,000 by Dr. Little, Civil Surgeon of Mooltan, for attendance on a recent occasion on the Nawab of Bahawalpur.

Dr. Elizabeth Bielby, Physician to the Lady Aitchison Hospital, Lahore, proceeds on long leave to Europe shortly.

Small-pox of a virulent type is raging in Gujranwala, Jhelum and Rawalpindi.

Miss Charlotte Ellaby, M. D., came out to India two months ago at the request of H. H. the Jam of Jamnagar, in order to perform an operation for cataract on his wife. We are glad to hear that the operations on both eyes have been entirely successful.

Speaking of the death of Father Denza, the late astronomer of the Vatican Observatory, the *British Medical Journal* says he was the foremost of the climatologists of our day, and that his researches on the origin of the Sirocco were a most solid gain to science.

Small-pox has appeared in Calcutta in a severer form than it has for some years. The weekly death-rate from this disease has gone up from 2 to 14 and 84, and several Europeans and Eurasians have been among the victims. Vaccination is being actively resorted to.

Sir John Tyler, Inspector-General of Prisons, takes three months' leave, beginning in the hot weather. Dr. Geoffrey Hall, Superintendent of the Naini Central Jail, will officiate for him.

Surgeon-Major Clarence Smith has submitted his memorial to the Secretary of State, praying that he may be publicly tried or reinstated into the I. M. S.

Dr. George King, F.R.S., Superintendent of the Botanical Gardens, Calcutta, has been granted two years' extension of service by the Secretary of State on the recommendation of the Government of India.

Assistant Surgeon C. E. Cornelius, I. M. S., Peshawar, met with a fatal trap accident on the night of the 18th January resulting in a fracture of the base of the skull. He died next morning. He was a very promising young officer.

It is rumoured that Surgeon-Colonel Robert Harvey, M.D., D.S.O., will succeed Surgeon Major-General Bradshaw as Surgeon-General of the British forces in India. Colonel Harvey has postponed his leave.

Dr. Ranjit Singh, L.M.S., a successful practitioner of Agra, was decoyed by ruffians into a village and murdered. Seven arrests have been made of alleged perpetrators of the deed.

Mr. Arthur R. C. Sanders, son of Surgeon Lieutenant-Colonel R. C. Sanders of Calcutta, was fifth on the list among the successful candidates for the Royal Military Academy at Woolwich.

Dr. Fatch Chand, M. B., B. S., L. L. Sc., L. R. C. P., Edin., L. S. A., London, late Civil Surgeon of Gujranwala, has launched into independent Private practice.

Current Medical Literature.

MEDICINE.

Whooping Cough.

At a lecture delivered at the Charing Cross Hospital, Dr. J. ABERCROMBIE divided this disease into *three* stages of symptoms:—The catarrhal, the spasmodic, and the period of convalescence. Fever is not necessarily present, but it may be in the second stage, and especially in lung complication. There are paroxysms of a hard, irritable cough (especially at night) but the hoop is not always present and babies, under six months old, who do not usually hoop turn red or blackish in the face after each paroxysm of coughing. There may be coryza, epistaxis, suffusion of the eyes, and sometimes the severity of the paroxysms produce hernia or bleeding from the mouth, nose, lungs, ears or into the conjunctive but hemorrhages into the skin are very rare. The duration may vary from one month to two or three months, but the infectiousness rarely six weeks after the onset of the illness and second attacks very rarely occur. Although the disease is highly infectious and very short contact is necessary, yet no special bacillus has yet been found and no explanation is forthcoming as to why the attack follows so closely on menses. Amongst its complications and sequelae are:—Collapse of the lungs or of part of the lungs, acute emphysema, bronchitis, catarrhal pneumonia, pleurisy, empyema, hemorrhages into the lung, brain or meninges convulsions, thrombosis of the sinuses, persistent vomiting leading to wasting, diarrhoea, epistaxis, hæmoptysis, sub-lingual ulceration, caseous glands, epilepsy, hemiplegia, sclerosis of the brain and acute tuberculosis as an ultimate sequel. The younger the child the graver the prognosis and every complication enhances the danger; but there are no *post-mortem* appearances peculiar to the disease. There is no special treatment necessary in slight cases, beyond strict hygiene, careful diet, expectorants and diaphoretics. Belladonna and ammonium bromide are invaluable for the paroxysms, but some prefer liq. atropine sulph. in half-drop doses to belladonna, and others recommend paregoric, and special medication should be directed towards any complication that may present; but change of air and cod liver oil work wonders in many cases.

Starting points of Tuberculous Disease in Children.

Dr. J. W. CARR divides tubercular infection into *three* classes, those in which (1) there was a definite lesion at the seat of infection, (2) there was no local lesion at point of infection and (3) those in which the constitutional infection developed later on; the local lesion being slight or healed as to starting points he distinguishes *five*:—(1) In the glands the liability being at its maximum in infancy and decreasing in later childhood. (2) Lesions in the cervical glands, as in the joints, may be due to infection by the blood, but caseation of the bronchial and mesenteric glands occurs from direct infection from the organ to which they are connected as bacilli pass through the lungs and intestinal walls and then enter *not* the blood vessels but the lymphatic channels. (3) Though infection occurs through the intestines, still tuberculous disease starts more frequently in the thorax than in the abdomen. (4) Caseation of internal glands is often unsuspected and impossible of diagnosis when associated with obscure febrile conditions. (5) Unhealthy mucous membranes and rickety conditions. He thinks that prophylaxis by increasing the resistive powers of the system against the access of bacilli is the wisest way of dealing with tubercular diathesis.

Subnormal Temperature of the Body.

JANSSEN finds that though the temperature may be normal in severe collapse, still very low temperatures may be found unaccompanied by any symptoms of collapse. He thinks that when subnormal temperatures persist in cachectic persons, the prognosis is generally unfavorable, and he attributes this fall of animal heat to nine sets of causes:—(1) Withdrawal by heat by exposure of the body to a very cold atmosphere or by immersion in very cold water. (2) After cholera, diarrhoea, profuse hæmorrhage, &c., where there is great loss of fluids from the body. (3) Diabetes, pernicious anemia, cancer in the alimentary canal and other conditions of cachexia and inanition, many chronic mental diseases and during convalescence from fevers. (4) Grave circulatory disturbances. (5) Diseases of the brain and central nervous system. (6) Intense irritation of sensory nerves and surgical shock. (7) Extensive burns and affections of the skin. (8) In the course of certain fevers as in pyæmia or the temperature may remain subnormal for a long time *after* fevers. (9) In diabetic coma, the auto-intoxication of uræmia, and in poisoning by alcohol, atropine, carbolic acid and morphine. He furthermore declares that subnormal temperatures are far more common than is generally supposed, and that depressions under 91.4°F (33°C) are by no means rare.

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SURGERY.

The Treatment of Ophthalmia Neonatorum.

KALT recommends irrigation of the eye with a 1 to 5,000 solution of potassium permanganate introduced through a small funnel, one end of which is placed between the eyelids, and the other connected with the bottle containing the fluid, which should be placed about a foot above the patient's head. The irrigations should be made twice a day, and two quarts of the fluid should be used at each time. If the disease is attended with serious or extensive trophic changes in the cornea, the irrigations must be used more frequently, say four times a day, and gradually lessened as the inflammation disappears. At a recent meeting of the Ophthalmological Section of the New York Academy of Medicine, this plan of treatment was favorably commented on by Dr. H. KNAPP, who had seen its application by KALT.—*N. Y. Med. Jour.*

A New Method of Resecting the Rectum.

DR. ROUTIER described (Chirurgical Society, Paris) a method of resecting the rectum as devised by MOULONGUET, a modification of KRASKE'S operation. The first step is the same as in KRASKE'S operation; the sphincter is then dissected out, and even though the lower portion of the rectum is found healthy, it is cut away instead of being preserved, as in KRASKE'S operation. The sphincter, after having been dissected out, is lined by the upper portion of the rectum, which is pulled down for this purpose and sutured to the edges of the wound at the anus. The perineosacral wound is then sown up, with a drain in the lower portion. In DR. ROUTIER'S estimation the usefulness of the operation is rather limited, especially to cases in which the cancer is not situated high up, and in cases in which the sphincter is intact.—N. I. Med. Rec.

Trephining for Head Injuries.

MYNTER in the inside of two years trephined 27 cases: 15 for fracture of the skull, all recovered except 4, in whom there was extensive fracture of the base; 5 for traumatic epilepsy, of the 4 who were greatly improved one began to get fits some six years after the injury to his skull and gradually got worse, until he was trephined, after which he rapidly recovered and returned to his work for 17 months, when the fits returning as bad as ever he was again trephined, and after six months' absolute rest left hospital apparently cured. In 5 cases for microcephalus with idiocy there was no improvement. One case of subdural hæmorrhage with aphasia and hemiplegia was completely restored to health, and one case of abscess of the brain in which there was very rapid recovery.

Novel Treatment of Oblique simple Fracture of the Leg.

AFTER freely exposing the seat of fracture and bringing surfaces into accurate apposition, MR. A. LANE drills holes through the broken tuba and firmly secures the fractured parts in position by means of plated steel screws in which the thread runs right up to the head. This treatment not only shortens the period of recovery by compelling union by first intention without pus formation, but also immediately relieves pain by the absence of tension and extravasation of blood into the tissues, as well as prevents the deviation of the axes of the lower fragments of the broken bone from their original dissection and the sense of insecurity in and pain of the joints brought about by that deviation.

Laminectomy for Spinal Fracture.

WHILE he admits that damage to the cord occurs the moment that any vertebra is broken and that the possibility of restoring function and limiting secondary sequela rapidly decreases with time, ROBERTS advocates operation under antiseptic conditions, and suggests an exploratory incision whenever doubt arises as to the existence and location of spinal fracture, as prompt removal of the pressure on the cord holds out the only chance for restoration of its function, and though the damage to the nervous system may often be irreparable, still laminectomy gives the patient a chance which, justifies the risks from hæmorrhage and the shock of the injury as also of the operation by removing the immediate danger to life.

OBSTETRICS AND GYNECOLOGY.

Sepsis Puerperalis.

GOLDSCHNEIDER follows KEHRER'S classification: (1) *Sepsæmia*, a febrile state due to resorption of putrid masses from the cavum uteri. This fever, which subsides after thorough local antiseptic treatment, shows peculiar features: intermittent or markedly remittent, initial chills, full pulse

but of moderate tension, respiration 40 per minute, stinking lochia and sometimes herpes labialis. (2) *Peritonitis puerperalis*, in which the temperature may rise from 38° to 42°C, and the abdominal tenderness is characteristic of peritonitis. (3) *Puerperal pyæmia, thrombophlebitis, septic pyæmia*, in which the prognosis is better than in the septic form, fever pulse full and bounding, stinking lochia, repeated chills, embolism, pus or pyogenic products circulating through the blood, and sometimes diphtheritic endometritis and diphtheritic puerperal abscesses. (4) *Septicæmia*, which varies according to the malignancy and number of the invading streptococci. The lines for treatment are:—Local therapy in sepsæmia, but no local treatment in the other forms of puerperal fever, except gentle irrigation in endometritis purulenta. Abundant nourishment, alcohol, absolute rest and sleep, active stimulation and tincture strophanthus in cardiac weakness.

Vaginal Hysterectomy by Enucleation without Ligature or Clamp.

TO SAUTER is due the honor of being the first (A. D. 1820) to perform this operation, which is described in CHELUS "System of Surgery," published 1847, but no one seemed to care to follow suit till very recently, when PRATT of Chicago revived it, and on 12th October 1894 it was performed for the first time at New York, U.S.A., by DR. J. R. GOFFE. The subject was an Irish woman *æt.* 46, suffering for 7 years with complete procidentia uteri and its train of torture. Asepsis having been established, a circular incision was carried round the cervix through the vaginal wall with a scalpel, and the tissues pushed away with the handle of the knife. Adhering closely to the uterus, he dissected away the tissues with a THOMAS'S spoon saw till he reached the peritoneum in DOUGLAS'S pouch, which he first snipped with the scissors and then tearing it right and left with his fingers continued the dissection with the spoon saw till he separated the bladder from the uterus and saw the cornua of the latter sustained by nothing except the round ligaments, which he transfixed by passing a single strand of braided silk (high up) through the upper part of each broad ligament and then delivered the uterus by cutting away the round ligament at either horn. The peritoneal surfaces having been brought in contact with each other by strong catgut sutures and occluded the upper end of the vagina by turning all raw tissue into it and bringing down and firmly securing the broad ligaments to its upper part by means of silk sutures, a light packing of iodoform gauze completed the operation, which took a few seconds less than half an hour. There was little or no after-hæmorrhage, and the patient's recovery was uninterrupted.

The Care of Pregnant Women.

DR. DEWEES of Salina holds that the true source of suffering during gestation and child-birth is found in the carelessness or ignorance of civilisation with its fixed habits of excesses which women should be taught to resist by cultivating the self-discipline necessary to enable them to prevent the continuous irritation from excesses in life habits, as impure sensual indulgences, indiscriminate excesses, improper posture, food, dress and drink and erroneous habits of living all conduce to the diseases peculiar to pregnancy and parturition, and which are largely preventible by correction or removal of these errors. He also insists on the necessity for the physician to ascertain whether the patient be really pregnant and whether the pregnancy be uterine and normal or abdominal, tubal or abnormal. He should keep a record of the temperature, make repeated examinations of the urine, and carefully note the age, history, parity, environments, general health, habits and station of life, dress, food, drink and period of gestation.

Symphysiotomy in Private Practice.

WALLICH called in to a multipara in her fifth labor, which was proceeding very slowly—the dilatation being about the size of a 5 franc piece only, after 55 hours of travail. When the membrane ruptured, the amniotic fluid was greenish and the head, which was still above the brim, showed no tendency to descend, although at the end of 72 hours the pains were still vigorous and the fluids had been already discharged 7 hours. Forceps proving of no help, the patient was placed on a chest of drawers in the obstetrical posture, anaesthetised, and symphysiotomy performed under antiseptic precaution. The cartilage and sub-pubic ligament being divided, the pubic bones were separated for 5.5 cm, and after the extraction of a living child weighing 3810 grammes and the placenta, the pubic bones were approximated, the uterus was washed out, the wound sutured and the pelvis was bound up with a plaster-of-paris bandage. On the eighth day the deep stitches were removed, the superficial on the following day, the plaster-of-paris belt on the 13th, and on the 20th day the patient moved about without any pain. The following measurements were taken of the foetal head which refused to pass through a sacro-subpubic space of 10.7 c.m. diameter: Biparietal 9.4 c.m., bitemporal 18.2, sub-occipitobregmatic 9.9, suboccipito frontal 11.6, occipito frontal 12.1 and occipito mental 11.6.

The Management of Abortion.

DR. E. J. ILL points out that as abortion is a pathological and not a physiological condition, as is birth at full term, it becomes a duty if there be any certainty that the product of conception will be cast off, to at once relieve the patient instead of letting her run the risks pertaining to retained secundines. Hot vaginal douches and hot rectal injection considerably assist the uterus in its work of emptying itself slowly of the intact ovum and occasionally dilatation of the os externum with Goodell's dilator gives satisfactory results. When the ovum is intact, the uterus forces it out into the cervical canal from whence it can easily be removed by a sweeping motion of the finger. If there be severe hemorrhage, place patient on her back with hips over the lower end of a table, cleanse vagina and cervix thoroughly, introduce a Sim's speculum through which push a long narrow strip of gauze into the uterus till the cavity is completely filled up, and securely plug the vagina round the cervix and os. In those cases where the uterus will not do its own work of expulsion pass two fingers of the right hand, per vaginam, anterior or posterior to the cervix, according as there may be an antroversion or a retroversion, and with the left hand press the uterus from the abdomen down on to the right hand fingers until the ovum is broken and a finger passes into the uterine cavity, when thoroughly wash the vagina and vulva with soap and hot water, irrigate with 1 in 4000 bichloride solution, anaesthetise the patient, place her in lithotomy position, introduce a Sim's speculum through which grip the anterior lip of the cervix, so as to straighten the canal, and after widely dilating the canal with an Ehlinger or a Goodell dilator thoroughly curette the uterine cavity with a sharp instrument, taking care to completely remove the entire endometrium, and paying special attention to the horns and fundus which are the most difficult parts to clean. Thoroughly irrigate the uterus and vagina with bichloride solution, and after careful examination that nothing is left behind of the products of conception, mop out the vagina and loosely pack it with gauze. Serious consequences never follow this operation when carefully performed.

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The Inoculability of Cancer.

DR. GRATIA reported, at the Academy of Medicine, Brussels, a series of experiments, in which he had employed grafting and inoculation, with the object of proving or disproving the inoculability of cancer. The result of his experiments led him to conclude that cancer does not seem to be inoculable even between individuals of the same species. He likewise feels justified in making the following statements: 1. The parasitic nature of cancer has not been satisfactorily proved. 2. The direct or indirect contagiousness of this neoplasm has not been proved; the most that can be admitted, in the present state of our knowledge on this subject, being the possibility of ingrafting, that is to say, transplanting cancer, and that only in individuals exhibiting exceptional predisposition, such as cancerous patients themselves. 3. The etiology and pathogenesis of cancer are still undetermined.—*N. Y. Med. Rec.*

Vitality of the Typhoid Bacillus.

ACCORDING TO UFFELMANN (*Centralbl. f. Bakt.*) typhoid bacilli resist drying for a long time. From his investigations he concludes that these micro-organisms retain their vitality in a dry state for many days,—in ordinary earth, twenty-one days; in street sweepings, thirty days; or more in sand, eighty-two days; on wood, thirty-two days; and on linen over sixty days. In moist media it is very probable that the microbes would retain their power of growth still longer. The same investigator proves that typhoid bacilli may be carried by the air as well as by the clothing, and that they are thus capable of infecting milk, water, and various food stuffs.

UFFELMANN's mode of distinguishing the typhoid bacillus may be briefly stated as follows: In the microscopical examination, low powers, not exceeding 100 diameters, are employed. A careful note is taken of the movements of the microbes and the shape of the colonies as compared with typical colonies. The fact that typhoid bacilli do not induce fermentation in 2 per cent. lactose gelatin is also utilised, together with the characteristic growth upon methyl violet gelatin.—*Modern Med.*

Staphylococci and Acute Rheumatism.

SACAZE points out that in many cases of acute articular rheumatism it is possible to find, or obtain a history of some lesion which may allow these organisms to pass into the circulation. This lesion may be some injury or an acute tonsillitis of marked severity. He brings forward several cases in support of his theory, and also quotes the researches of SAINT-GERMAIN, who found joint effusion as the result of the intravenous injection of cultures of staphylococci of feeble virulence. In the fluid in these cases no organisms were found, as is frequently the case in acute rheumatism. On the other hand, BOUCHARD and CHAMAIN are quoted as having found large numbers of staphylococci in the serous effusion from the joints of patients suffering from rheumatism.—*B. M. J.*

Rapid Detection of the Typhoid Bacillus.

LYONNET gives the following:—An ordinary culture bouillon is taken and decolorised with animal black, and 1 per cent. of phenic acid and 20 per cent. of lactose is added, with a small quantity of Congo red. Owing to the phenic acid only the typhoid bacillus and bacterium coli are able to grow in it. If the typhoid bacillus be present, the milk sugar does not ferment; the bouillon becomes cloudy but remains red. If the coli bacillus be present, the bouillon becomes cloudy, the milk sugar undergoes fermentation, and lactic acid is formed, which changes the color of the bouillon from red to violet. Hence, if the broth remains clear, neither the typhoid nor coli bacillus is present. If the broth becomes turbid but remains red, it is probably due to the presence of the typhoid bacillus. Lastly, if the broth becomes turbid but at the same time is changed to a violet color, the presence of the coli bacillus may be inferred.—*San. Med.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The Prevention of Smells by a Film.

AN interesting observation on this subject has been brought to our notice by a correspondent. It consists in the fact that when a few drops (three) of eucalyptus oil are thrown upon the surface of the water in the pan of a water-closet before it is used, the smell of the faeces subsequently added is prevented from escaping. This seems to be due to the formation of a film of oil over the surface of the water and, of the faeces, so that the emanation of objectionable smells is prevented. Oil of eucalyptus would appear to be unique in the possession of this property, since other oils, used with a view of reducing what is to many the nauseating smell of eucalyptus, failed to effect the same result. This point is, however, receiving further investigation at the hands of Mr. J. FRETCHER, F.R.S.; but in the meantime we confess to being a little incredulous as to whether this method would serve as an effectual preventive of disagreeable smells arising when faecal matter is undergoing decomposition and when foul gases are being disengaged in visible bubbles.—*Lancet*.

The Use and Abuse of Toothpicks.

THE exciting causes of caries of the teeth are invariably external, and among these decomposition of food or of mucus between the teeth holds a prominent place. It follows that removal of such matter must be beneficial. One of the means of accomplishing this is the toothpick, which, judiciously used, is of undoubted value. Fool lodges between the teeth from a variety of causes: the extraction of a tooth may lead to those contiguous falling apart and so leaving spaces; improperly filled teeth, such as those left with rough edges or not sufficiently "contoured"—that is, built up to the original configuration of the lost part—will form fool traps; irregular position of the teeth or recession of the gums—all these will act in the same way. Attention to the dental toilet before company is certainly inelegant, but it is not necessary here to approach the subject except from a medical point of view. Of the materials used as toothpicks, the best is the quill with the sharp point removed, but with this, as with all other forms, care must be observed. By indiscriminate application the gums may be so irritated and injured as to cause recession and thus increase the existing trouble, or inflammation of the tooth membrane may be caused, a most annoying condition, and one in which the still more vigorous use of the toothpick gives temporary relief, only in reality to add fuel to the fire. Metal toothpicks are good because blunt-pointed, but are too thick to pass between teeth at all close together. Wood need only be mentioned to be condemned, for it is a by no means uncommon occurrence for small fibres to become detached and jammed between the socket and tooth, leading to chronic periostitis and even loss of the tooth if the condition is not recognised. An excellent substitute for the toothpick—one having few objections, and one which will save many a visit to the dental surgeon—is antiseptic, waxed, dental floss silk, which, passed between the teeth night and morning, will invariably reveal accumulations which have escaped the tooth brush, however carefully employed.—*B. M. J.*

The Feeding of Infants.

BEIDERT corroborates HEUBNER's bacteriological considerations of infant feeding by advocating the sterilisation of milk by boiling and subsequently cooling in a Soxhlet's apparatus, as cow casein is difficult of digestion and the undigested remains afford a soil for the growth of the micro-organisms that are formed in the saliva, stomach and intestines; and intestinal antiseptics chiefly depends on proper digestion and absorption of the intestinal contents. He observes that, though children appear to thrive

on breast-milk, they may yet have thin diarrhoeal stools which sometimes contain mucus, but this is not the case with those fed on cow's milk. In his opinion cream ought to be added to the milk to make it more digestible. He regrets that Loeffler's half-peptonised milk, which nearly approaches to human milk, cannot be effectually sterilised, and shows that the casein obtained from woman's milk chemically differs from that got from cow's milk.

A Dental Surgeon's Fees.

LAST week a dental surgeon successfully sued a lady patient for twenty-three guineas, the amount of his fees for the insertion of artificial dentures, including several visits required in the preparation of the mouth. It appears that the patient wrote expressing her satisfaction with the work, but subsequently returned the lower case, demanding back her old one, which had cost twelve guineas, but which had been broken up by the dentist and for which £1 had been allowed, together with a letter couched in such terms that Mr. PENFOLD, the plaintiff although expressing his willingness to make any requisite alterations, declined to do so unless an apology were offered. The defence took the usual form as to the value of the material used in the construction of the teeth. The plaintiff's case was to the effect that this had nothing whatever to do with the fee charged, any more than it would with a surgeon, say, in a case where splints were required. It is entirely a matter of skill and experience, and any reputable dental surgeon, whether the fee be a large or a small one, would not take this into consideration, either with regard to stoppings or mechanical work and so on. Now, apart from this particular case, there is something to be said for each of these views. Were the latter carried out by all dentists—that is, were no regard to expense taken—one of two things must happen: either the large body of practitioners would become bankrupt or the poorer classes would be practically debarred from dental services, for hospitals could not possibly supply the want, they having to consider ways and means; but undoubtedly those dental surgeons who are fortunate enough to command good fees should not, and we believe do not, base them according to whether gold or vulcanite is used for an artificial set, or gold or a plastic material for a stopping. As the judge justly remarked: "If a woman will go to a West-end dentist where big prices are charged, she must pay for it. If she had gone to other dentists she might have got the set for 20s."; but he did not suggest that the two were of equal value.—*Lancet*.

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THERAPEUTICS AND PHARMACOLOGY

Diphtheria Antitoxin.

HANSEMANN denies that antitoxic serum has either prophylactic immune or curative powers, and submits cases where the serum has failed to cure and where it has set up secondary and dangerous inflammations. He contends that the cures obtained in the lower animals by antitoxic serum were cures not of diphtheria but of the "disease caused by Loeffler's bacillus," and shows that the hospital mortality for diphtheria was necessarily longer than in private practice, because only the most severe cases need to be sent to hospital. KICHOW, on the other hand, maintains that antitoxin has high therapeutic value, and holds that it is the duty of every medical practitioner to employ this remedy in diphtheria. BEHRING supports this latter view strongly and KLEIN, who thinks that ROUX's plan of preparing the serum is not only too tardy and tedious, but also difficult of acceptance from a theoretical point, contends that while 1 gramme of the twenty-three or of the twenty-six days' horse serum was capable of protecting from 20,000 to 40,000 grammes body-weight of guinea pig against the living bacilli and toxin of

diphtheria, 5 to 6 or 10 c.c. of this serum injected into the human subject gave highly satisfactory results in which the further spread of the membrane was entirely arrested and the existing membrane rapidly loosened and discharged. KLEIN works on the hypothesis propagated by the researches of BEHRING, KITASATO, PROFFER, WASSERMANN and others that the blood of an animal that has acquired immunity possesses antitoxic properties, whose degree standing in direct relation to the degree of resistance acquired by the animal furnishing it not only renders that particular animal capable of overcoming the disease in question, but also other animals into which its blood or serum is introduced. After giving a horse a few injections of attenuated living bacilli together with their toxin, he repeatedly injects into the same animal large quantities of living diphtheria bacilli (*minus* their toxin) taken from the surface of solid cultures of gradually increasing virulence. Every such injection is followed by a slight rise of temperature and a local tumour without suppuration at the point of inoculation. As soon as one tumour disappears a new injection is made, with large quantities of living bacilli scraped from the surface of solid agar and gelatine media, so as to allow the bacilli to grow, multiply, and by the end of the third week gradually produce within the body of the horse, first the toxin and ultimately the valuable antitoxin, and if after the first bleeding the horse be again twice or thrice injected with virulent living bacilli from surface cultures, the further serum from such horse will possess even increased antitoxic power.

Treatment of Alcoholism by Strychnine Nitrate.

BREED concludes a paper in the *Medical News* on this subject as follows:—

1. That we have in this drug a remedy that actually, for a period as yet undetermined, removes the desire for alcoholic stimulation in the chronic inebriate, and that without the least effort on his part.

2. A remedy that removes the distress and gnawing at the epigastrium, so common upon the withdrawal of alcohol.

3. A remedy that tones up the nervous system, allays the insomnia, the flighty and other bad feelings in the head, the mental disturbances, and the tremulous agitation and uncertainty of voluntary motions due to the withdrawal of stimulants.

4. A remedy that brings back the appetite and general physical vigor of the body.

5. A remedy that temporarily transforms a wholly demoralised creature into a man.

6. A remedy that is of great value in acute attacks of alcoholism.

7. Incidentally, a remedy that is an exceedingly good and safe heart-tonic.

8. More than all, a remedy that exerts a moral influence upon the patient, giving him what he had before wholly lost,—to wit, hope, enthusiasm, self-confidence, and courage, where before was despondency, abandonment, and despair; a steady, straightforward gaze, and a bright, youthful expression of the eye, which replaces the shamefaced, sneaking, apologetic air of total depravity of the chronic inebriate.

9. We have in the nitrate of strychnine not a remedy that will oblige a man to abstain from drink if he does not want to do so, and such subjects do not deserve one. From the results obtained by the gold cure, the silverash cure, the Kelsey cure, etc., we may conclude that we have a remedy that is as efficient as any of these and much safer; a remedy, moreover, that is not secret, and can be used by men who know the action of drugs and can use them with discretion and safety to the patient.—*Gallard's Med. Jour.*

Oil Injections in Dry Pleurisy.

DR. CERENVILLE of Lausanne, in obstinate cases of dry pleurisy, injects about thirty drops of olive oil, previously sterilised, with the object of imitating nature in providing a lubricating fluid. This very small quantity of oil appears to be sufficient for the purpose, as it is very diffusible and rapidly spreads over a very large part of the surface of the lung. With care and practice it is not difficult, he says, to find the right depth to insert the needle so as to penetrate into the pleural cavity without wounding the substance of the lung. He has up to the present time employed this little operation in ten cases which had resisted the ordinary methods of treatment by external stimulating applications, &c. In two of them only was no beneficial result observed, in six a marked improvement in the pain took place within a few hours, while in the remaining two cases a complete and lasting cure was obtained. It is obvious that this plan may conceivably be useful in pericarditis troubles; indeed, DR. CERENVILLE has employed it already in one case of the kind. Of course, he does not recommend that in every case of dry pleurisy olive oil should be injected, but he brings his plan before the profession as one that may fairly be tried in obstinate and painful cases when other and more ordinary means have failed. The site which should be chosen for the insertion of the needle is the spot where the friction sounds are the most distinctly heard.

Vomiting of Pregnancy.

DR. GOODALL recommends:—

| | | | |
|--------------|-----|-----|---------|
| Cerii Oxulat | ... | ... | gr. i |
| Ipecacuanhae | ... | ... | gr. i |
| Creasoti | ... | ... | gtt. ij |

M. Sig.—To be taken every hour until nausea is controlled.

Pruritus.

| | | | |
|------------------------|-----|-----|-----------|
| R. Liq. ammon. acetat. | ... | ... | ℥ij |
| Acid. hydrocyan. dil. | ... | ... | ℥j. |
| Sp. rectificat. | ... | ... | ℥ij. |
| Aq. rose | ... | ... | ℥viij.—M. |

—*Universal Medical Journal.*

Filaria Sanguinis

in chyluria may be driven out of the system by thymol gr. j. every four hours, with subsequent doubling of the dose.—*Bull. gen. de Ther.*

Gastralgia.

A formula emanating from Dr. Monin is:—

| | | | |
|--------------------|-----|-----|---------|
| R. Tinct. conif. | ... | ... | ℥j |
| Tinct. valerianae. | ... | ... | ... |
| Tinct. opii camph. | ... | ... | ... |
| Aq. laurocerasi | ... | ... | ss ℥ij. |

M. Sig.: Seven drops in a little milk when the pain appears.—*Prescription (U.S.)*

Menthol in Pruritis.

DR. COLOMBINI uses menthol in alcohol or in oil of almonds, or incorporated with ointments, for the relief of itching affections of the skin and mucous membranes. From three to five per cent is said to be one of the best remedies for this troublesome disease.

Hæmoptysis.

RECTAL injections of chloral, 1·5 to 2·5 grammes (24 to 38 minims), repeating dose if necessary. Effect apparent in one-half or three-fourths of an hour. Apparently acts as prophylactic. Fifteen cases successfully treated. First ascertain if heart be healthy.—(*J. PAL, Univ. Med. Jour.*)

Correspondence.

TEETOTALISM AND ENTERIC FEVER.
TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—At the Indian Medical Congress held in Calcutta during Christmas week, Surgeon-Captain FREYER, M.S., read a paper on "Teetotalism and Enteric." On the 22nd November 1894 the *Civil and Military Gazette* had published a leader under the same heading which was fully replied to by me in a letter published in its issue of the 7th December. DR. FREYER in his paper attempted to connect the liability to enteric fever with the habit of *temperance*, though as to in what manner this association came about he did not furnish any information. He merely related how the teetotalers in the Royal Irish Fusiliers at Allahabad and the 18th Hussars at Umballa, during a certain short period, had larger number of admissions for this disease than non-abstainers. But as I pointed out in the discussion that followed, and which appeared to meet the approval of the meeting, these figures were far too few and limited to afford any ground for conclusions one way or the other, and it was unjustifiable trying to generalise from one or two particular instances and attempting to unsettle the minds of temperance men. On common sense grounds, moreover, it is erroneous to even suspect that teetotalers would be more prone to a disease which primarily attacks the bowels, while the non-abstainer who not only "runs himself down," and thus reduces his vital powers, but indulges in an irritant (more or less diluted) which has peculiar, almost selective properties on the very parts of the internal organs specially affected by the disease, goes scot free. It does not stand to reason. The pertinent question may also be asked—Why is it that enteric is so common among officers, very few of whom are total abstainers?

DR. FREYER and other Army doctors, including Surgeon-Major DAVIES, late Professor of Hygiene, Netley, very properly condemned the barrack filters—and here probably lurks one of the main causes of this dread malady. DR. EARNEST HART, the Editor of the influential *British Medical Journal*, (an honored delegate to the Congress) afterwards joined in publicly condemning the Macnamara filter as the very worst one in use. I also added my humble voice to the general outcry for pure water, and pointed out how in the Central Jail (population 1,000) at Midnapore, of which, I am medical officer, severe epidemics of bowel disorder occurred periodically, and in 1893 the mortality rose very high (60 per 1000), but that since, among other things, the water had been really and thoroughly *boiled* and then properly filtered through wood charcoal and burnt brick (carefully attended to and changed fortnightly) our sickness and deaths had diminished wonderfully. And this is what I would urge on the military authorities. Use for every barrack a LARMORE'S guarantee boiler—fit up a simple masonry filter and reservoir—and then see if you do not defy the cholera, typhoid, and fever germs more than you do now.

Of course there are other things that also need attention: there is the milk and butter supply, the pure feeding and watering of cows, the purifying of the *goualas*, dairies, &c.; the heavily manured cantonment grass farms, and night-soil grounds, which poison the air and

subsoil, and of course the water passing them into our wells; and there are the *dhobies* washing clothing in foul pools, and so on. But let us first take care of our drinks—avoid bazar aerated waters, ginger-pops, and sherbuts and *boil our water and our milk*.

But even against old odds "the" temperance man must come off first best. SIR JOSEPH FAYEE, I. M. S., the great Surgeon at the India Office, says that "the young man who, coming out of India, neither smokes nor drinks is doubly armed against sickness and all other evils."

Yours, &c., P. W. O'GORMAN, Surgeon-Captain, I.M.S.,
Civil Surgeon, Midnapore.

MIDNAPORE, 24th January 1895.

CARBOLIC ACID FOR CARBUNCLE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—He is a bold man who ventures to say of a thing like carbolic acid that it was *first* applied in any disease within the last few years. Surprised to see DR. WALLACE'S note with regard to its *first* use in carbuncle, I looked up NEALE'S Medical Digest and find that SIR PETER EADE used it in 1869. I myself have tried it for 10 or 12 years, either the pure acid, or in combination with iodine. For 6 or 8 years I have used it as follows: filling a hypodermic syringe with the liquified acid, I inject it at five or six places just at the margin, with pressure so as to force the acid into the interstices of the areolar tissue; in this way the spreading of inflammation seems arrested and the constitutional symptoms remit. I had thought this method original; but find from the Digest that this was also practised and written about 20 years ago.

Anyhow, the method is one to be recommended. There is more to be said in favor of complete excision than DR. WALLACE'S article would seem to admit. It is suited for the robust and secures more rapid healing than any other plan. The method consists in cutting outside any infiltrated tissue, down to the muscular aponeurosis underlying it. Special care should be taken to work from above downward, gripping the edge of the carbuncle as it is excised firmly with a vulsellum forceps, and dragging it out and down, so that none of the discharge should come in contact with the fresh surface. Corrosive sublimate irrigation should be continued the whole time. No attempt should be made to draw the edges together.

In two or three days skin grafts may be applied; and by combined excision and grafting the time required for healing is shortened to almost half that of other methods.

I do not recommend this procedure in the aged, or the weakly, nor in cases where a well-defined slough is already visible. It is in the differentiation of cases, and adaptation of various methods that experience comes into play. I think carbuncle in Kashmir is specially severe. A slough 4 or 6 inches in diameter is not rare, and I have seen it over a foot.

Yours, &c., ARTHUR NEVE, F.R.C.S.

KASHMIR.

INDIAN VITAL STATISTICS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I shall feel highly obliged by being furnished with information regarding the following points on "Vital Statistics"—

1. The average life of the Indians.
2. The highest number of years of their longevity.
3. Percentage death-rate at the age of 30, 40, 50, 55, 60, 70, 80 and 90 years.

Yours, &c., R. M. MAHAJAN, H.A.,
In charge Rajkot Dispensary, Katiawar.

RAJPOOTANA, 15th Feb. 1895.

REVIEWS.

A MANUAL OF HUMAN PHYSIOLOGY: PREPARED WITH SPECIAL REFERENCE TO STUDENTS OF MEDICINE. By Joseph H. Raymond, A.M., M.D., Professor of Physiology and Hygiene in the Long Island College Hospital, and Director of Physiology in the Hoesland Laboratory. (Publisher: W. B. SAUNDERS, Philadelphia.) Price \$ 1.52.

The work before us is divided into four principal sections, viz., (1) Physiological Chemistry, (2) Nutritive functions, (3) Nervous functions, and (4) the Reproductive functions. In the 366 pages of beautifully clear, large and easily readable letter-press, DR. RAYMOND has packed away an immense amount of information, useful to the student of medicine, and to the busy practitioner.

Bearing, as the work does, a special reference to the study of medicine, only the main facts and principles of the great subject of physiology, which lie at the very foundation of a sound knowledge of the healing art, are given, relegating the more recondite and obtruse parts of the subject to larger text-books. As a practical work then, DR. RAYMOND'S "Manual of Human Physiology" should go hand in hand and *pari passu* with every clinical and practical work on medicine and surgery. Under the heading "*Nutritive functions*," such subjects as digestion, absorption, respiration, vital heat, circulation, lymphatics, ductless glands, skin and kidneys are very fully and accurately considered. The brain and nervous system also receive a large share of attention.

The Senses of Sight and Hearing are treated in a very full, able and "assimilable" manner, that is to say the facts are put in such a terse way as to be easily grasped and "assimilated" by the student and retained for future reference.

The closing chapters are devoted to reproduction and development.

DR. RAYMOND is to be congratulated upon the production of a treatise on *The Institutes of Medicine*, at once practical and clinically useful, in that it contains all that can be said on the subject "in a nut-shell" as it were,—in that it is accurate and up-to-date, and that it can be used along with any published work on medicine or surgery to throw further light upon and elucidate those subjects.

THE CARLSBAD TREATMENT FOR TROPICAL AILMENTS AND HOW TO CARRY IT OUT IN INDIA. By Louis Tarleton Young, M.D., B.Ch., B.A., Medical Travelling Prizeman (University Dublin). Formerly Professor of Materia Medica and Chemistry in the Lahore Medical College, and 2nd Physician to the Mayo Hospital, Lahore; Fellow and Examiner, Punjab University; Civil Surgeon, Umballa; Surgeon-Major, H. M's. Indian Army. (Publisher: Thacker, Spink & Co., Calcutta.)

This splendid monograph on the Carlsbad Treatment of Tropical Ailments stands quite unique, consisting as it does of 9 chapters and an Appendix; DR. YOUNG has, in the 111 pages of excellent reading matter, given us a very practical and most useful guide to the springs and baths of Carlsbad. Having himself been a resident of India for many years, he has explained his subject with

a special view to the exigencies and needs of dwellers in the tropics.

The opening chapter is devoted to information regarding how to get to Carlsbad, cost and mode of living, physicians, springs, baths, &c. For those who can afford an outlay of £50 and can obtain 3 months' privilege leave, this chapter will give full particulars as to how the time may be most profitably spent.

The next two or three chapters are devoted to explaining methods of conducting a Carlsbad course of treatment, diet, drinks, amusements; the various kinds of baths are explained, e. g., the Russian, the hot salt-water, the mud or peat bath, the pine, the steel, electric baths, &c.

DR. YOUNG also judiciously gives us a chapter on how to carry out the Carlsbad treatment in India, or the "artificial course."

This will no doubt be a boon to those whose limited income preclude their going to Carlsbad. There are two methods described, the first is to procure 2 dozen bottles of Carlsbad sprudel water, and the second (an alternative) 2 bottles of Carlsbad salt (powdery form). DR. YOUNG also gives in a clear, tabulated form indications where the treatment will be most useful, and enumerates the diseases wherein it will do most good, such as malarial enlargements of liver and spleen, chronic dysentery, diarrhoea, anaemia, dyspepsia, gout, rheumatism, diabetes, &c., mentioning at the same time those diseases where it is contra-indicated. Full directions are given as to how and when to apply the course of treatment.

The remaining chapters deal with the incompatibility of acids with the Carlsbad treatment, chemical constitution of the Carlsbad water and salt, tropical diseases for which Carlsbad is specially suitable, its special action, on some forms of dyspepsia common in the tropics, and hints for tropical residents.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia; Chief Assistant Surgeon, Jefferson Medical College Hospital, etc. (Publisher: W. B. Saunders, 925 Walnut Street, Philadelphia.) Price \$ 2.50.

The aim of this manual, viz., to present in clear terms, and in concise form, the fundamental principles, the chief operations, and the accepted methods of modern surgery, with which DR. DACOSTA started out, has been amply and creditably fulfilled in his excellent little work on surgery.

The opening chapter is devoted to a full and succinct account of bacteriology—a most important subject for the better appreciation of disease and application of anti-septics.

Considerable matter is devoted to fractures and dislocations. So important as these cases are of daily occurrence affording excellent material for clinical study. Ophthalmology, gynaecology, otiology, otology and laryngology have not been dealt with, as being best relegated, in this age of advanced specialized science, to specialists.

Some of the remedies recommended, though more popular in America than here, such as peroxide of hydrogen

campho-phenique, camoline, &c., will no doubt be adopted for more general use in time to come. The print throughout is beautifully large and clear, the illustrations good and the tinted plates representing examples of bandaging excellent while the paper is superior. On the whole, Dr. DaCosta may be congratulated upon the production of a work of great practical use alike to the student and the surgeon. Dr. DaCosta's "Manual of Surgery" stands mid-way "between the complete, but cumbersome textbook and the incomplete but concentrated compend."

FALITA RASAYANA. By Chuni Lal Bose, M.B., F.C.S. Lond. Price Re. 1-8.

We have received a copy of Falita Rasayana, a book on practical chemistry in Bengalee, by Assistant Surgeon Chuni Lal Bose, M.B., F.C.S., one of the Chemical Examiners to the Government of Bengal. The subjects treated of in the book are those prescribed by the Calcutta University for the first M.B. and L.M.S. examinations, and we are glad to be able to say that these have been dealt with ably and at some length. After explaining the most important principles and laws which build up the structure of the science of chemistry, the author goes on describing in detail the various processes employed in the detection of *bases* and *acids*. In describing the tests for each metal, the author has given a short sketch of its physical and chemical characters as well as the sources from which it is obtained. Much useful information of medico-legal importance is to be found in the chapters on arsenic, hydrocyanic acid and vegetable alkaloids, which would be of use to medical men concerned in medico-legal work. The chapter on the analysis of urine has been written with a thorough knowledge of the subject, and the tests of some of the principal abnormal ingredients, such as *albumen*, *sugar*, *bile* and *chyle* have been brought up to date. The application of the tests recommended in the book at once suggests a thorough, practical acquaintance of the author with his subject. The busy medical practitioner, who has to do a few analyses of urine every morning, and Assistant Surgeons and Hospital Assistants who have to do a great deal more in the hospital will, we are sure, find in this book valuable help in their work. The diagrams of the apparatus and of the ordinary deposits have been neatly executed and a glossary of Bengalee scientific terms with their English synonyms has been given for easy reference. The book is, we believe, the first of its kind in the Bengalee language, and we think it is a valuable addition to scientific vernacular literature. It is fit to be made a text-book in the vernacular medical schools in Bengal, and we would heartily recommend this book to students and practitioners of medicine.

The Report of the Opium Commission, which has been prepared by the Home Department, has now received the Viceroy's approval, and will be published for general information without delay.

Mr. F. X. deAttaides, third grade Civil Assistant Surgeon of the Imperial list, having passed the prescribed examination for advancement, is promoted to the second grade, from the 2nd June, 1894.

Surgeon-Colonel Harvey is to be appointed Principal Medical Officer with the Punjab Army under the new scheme if he does not get the P. M. O.-ship of the British Forces.

Government Medical Gazette.

GOVERNMENT OF INDIA.

The services of Surgn.-Col. D. O'C. Bays, M.D., I. M. S., (Beng.) Offg. Insp.-Genl. of Civil Hosps., Punjab, are replaced at the disposal of the Milly. Dept. from date on which he relinquished charge of his duties.

The Governor-Genl. in Council is pleased to appoint the following gentleman to be a Fellow of the University of Calcutta:—

Surgn.-Maj. G. S. A. Ranking, M.D., Secy. to the Board of Examiners.

Surgn.-Col. F. B. Scott, M.D., C.M.G., A. M. S., P. M. O. Quetta Dist., leave (p.a.) for eight months.

Dr. H. E. Wells, M.B., is temply. apptd. as an Un-covenanted Med. Offr. and posted to Burma.

On relief by Hosp. Asst. Rahmat Ali, Hosp. Asst. Partab Singh is re-posted to the Stud Depot, Saharanpur.

The services of Asst. Surgn. L. J. Reilly are placed at the disposal of the Chief Commissioner of Burma.

Asst. Surgn. H. A. J. Gidney is granted privilege leave for 15 days, 21st Dec. 1894.

Dr. F. X. deAttaides, 3rd grade Civil Asst. Surgn. of the Imperial List, having passed the prescribed exam., is promoted to the 2nd grade, 2nd June 1894.

BENGAL GOVERNMENT.

Asst. Surgn. Upendra Nath Sen made over Malda Intermediate Jail to Surgn.-Capt. G. Jameson, 1st Jany.

Asst. Surgn. Hari Charan Sen, offg. at the Kishoreganj sub-divn. and Hybturnger Dispy., leave for three months.

Surgn. Lieut.-Col. K. P. Gupta made over Barisal Jail to Surgn.-Capt. J. G. Gordon, 7th Jany.

Asst. Surgn. Narendra Nath Gupta made over Noakhali Jail to Surgn.-Capt. T. Grainger, 5th Jany.

Asst. Surgn. Mahendra Nath Dutt to do superny. duty at the Med. Coll. Hosp., Calcutta, 4th Jany.

Asst. Surgn. Nil Kanto Chatterjee to do superny. duty at the Med. Coll. Hosp., Calcutta, 9th Jany.

Asst. Surgn. Kali Prasanna Banerjee, a superny. at the Med. Coll. Hosp., is apptd. to have temply. charge of the sub-divn. and dispy. at Silliguri, Darjeeling Dist., vice Asst. Surgn. Gopal Chunder Dey, on leave.

Asst. Surgn. Kasai Nath Ghosh, leave for three months.

Asst. Surgn. Umces Chunder Baerjee leave for two months, 22nd Nov. 1894.

PUNJAB GOVERNMENT.

On transfer from Shahpur, Dr. J. A. Fink assumed charge of the civil med. duties of Karnal on 24th Dec., relieving Asst. Surgn. Abnaahi Ram.

Surgn.-Col. J. Cleghorn, M.D., resumed charge of the duties of Insp.-Genl. of Civil Hosps., Punjab, 27th Dec., relieving Surgn.-Col. D'O. C. Bays.

Brig.-Surgn. Lieut.-Col. G. Massey, Civil Surgn., resumed charge of his duties at Murree on 6th Jany., relieving Asst. Surgn. W. Clarke, Lawrence Memorial Asylum.

Hosp. Asst. Chirag-ud-din, from the Teri Dispy., Kohat Dist., to the Rawalpindi Civil Hosp., for genl. duty, 3rd Jany.

Hosp. Asst. Ghazi-ud-din, Dailhouse Dispy., two months' priv. leave, 9th Jany.

Hosp. Asst. Ganesh Das, doing genl. duty at the Mayo Hosp., Lahore, to the Civil Hosp., Delhi, for genl. duty, 26th Dec.

Hosp. Asst. Amir Bakhsh resumed charge of the City (Old) Dispy., Amritsar, 5th Jany., relieving Hosp. Asst. Sawan Mal, transferred to the City (New) Dispy., Amritsar, 6th Jany., relieving Hosp. Asst. Jhande Khan, granted three months' priv. leave.

Hosp. Asst. Amir Khan, doing genl. duty at Karnal, was apptd. to the Karnal City Branch Dispy., 31st Dec., relieving Hosp. Asst. Nanak Chand, apptd. to the charge of the Karnal Jail and Police Hosps. 1st Jany., relieving Hosp. Asst. Chandan Lal, retired.

Hosp. Asst. Shadi Khan, Shabkot Dispy., Gujranwala Dist., three months' priv. leave, and was relieved on 30th Dec. by Hosp. Asst. Fazl Ihsai, transferred from the Jhang Dist.

Hosp. Asst. Amir Shah to do genl. duty at the Mayo Hosp., Lahore, 8th Jany.

The priv. leave granted to Asst. Surgn. Rias Bhagwan Das, Kaika Dispy., is extended by fourteen days.

BOMBAY GOVERNMENT.

Surgn. Lieut.-Col. F. A. Rowland, I. M. S., is permitted to retire from the service. 22nd Feb.

Surgn. Lieut. E. M. Moore has been apptd. to the med. charge of the Baroda Resdy. in addition to his duties as Med. Offr., 1st Regt. Bombay Infy., 26th Dec.

Asst. Surgn. Bhaa Govind, L.M. & S., is promoted from the 3rd to 2nd class, 17th Dec.

Surgn.-Capt. J. L. T. Jones, M.B., and H. Herbert, F.R.C.S., respectively delivered over and received charge of the Kaira Prison on 20th Dec.

Surgn.-Capt. H. Herbert, F.R.C.S., and Asst. Surgn. Dorabhai E. Kothawala respectively delivered over and received charge of the Kaira Prison on 20th Dec.

Surgn.-Maj. R. W. S. Lyons, M.D., and Asst. Surgn. P. P. Moolan respectively delivered over and received charge of the Ratnagiri Prison on 20th Dec.

The services of Surgn.-Maj. C. G. W. Lowdell, I. M. S., are placed at the disposal of Govt. for permanent civil employment.

Asst. Surgn. Phirozshah Palanji Mullan, L.M. & S., on genl. duty from 25th Dec.

Asst. Surgn. Palanji Hormasji Dadachanji, L.M. & S., priv. leave for one month.

Surgn.-Maj. C. G. W. Lowdell, to be Civil Surgn., Nasik, *vice* Surgn. Lieut.-Col. P. Murphy, M.D., retired.

Surgn.-Capt. H. Herbert and Surgn.-Lieut. W. Carr Sprague respectively delivered over and received charge of the Rajkot Prison on 18th Dec.

Surgn.-Lieut. W. Carr Sprague and Surgn. Lieut.-Col. F. C. Barker respectively delivered over and received charge of the Rajkot Prison on 21st Dec.

Asst. Surgn. P. P. Moolan and Surgn.-Maj. J. Crimmin respectively delivered over and received charge of the Ratnagiri Prison on 25th Dec.

CENTRAL PROVINCES GOVERNMENT.

Civil Hosp. Asst. Pandurang Laxman, doing duty under orders of the Civil Surgn., Seoni, is temply. apptd. to the charge of the Jail and Police Hosp., Seoni, *vice* Civil Hosp. Asst. Ganesh Sitaram, temply. apptd. to the Laknadon Branch Dispy., *vice* Civil Hosp. Asst. Lal Mahomed, apptd. to do duty at the Chappara Cattle Fair, Seoni Dist.

N.-W. P. AND OUDH GOVERNMENT.

Asst. Surgn. Bonomali Pal, in charge of the sadar dispy., Kheri, priv. leave for three months, 15th Jany.

Consequent on the retirement of Brig.-Surgn. Lieut.-Col. W. R. Hooper, Civil Surgn., Lucknow, Surgn. Lieut.-Col. B. O'Brien, Offg. Civil Surgn., 1st class, to be confirmed in that class, and to be posted to the Allahabad Dist. on his return from leave.

Surgn.-Capt. J. M. Crawford, Offg. Civil Surgn., held charge of the Civil Surgeoncy of Allahabad from the 7th to the 10th Jany.

Surgn. Lieut.-Col. A. J. Willcocks, Civil Surgn., on return from deputation, to the Agra Dist.

Asst. Surgn. Annoda Prasad Datta, on being relieved of the charge of the Sadar Dispy. at Bareilly, to the charge of the Sadar Dispy. at Kheri.

Surgn. Lieut.-Col. J. McConaghey, Civil Surgn., from Allahabad to Lucknow.

Surgn.-Maj. C. P. Lukis, Civil Surgn., from Agra to Shahjahanpur.

Surgn.-Capt. J. Morwood, Civil Surgn., from Shahjahanpur to Basti.

Surgn.-Maj. F. C. Chatterjee from Basti to Pilkhiti.

Asst. Surgn. Dalip Singh, on reserve duty at Lucknow, to the charge of the Karwi Dispy., Banda.

Hosp. Asst. Muhammad Boshan, on reserve duty at Lucknow, to hold charge of the Chunar Dispy., Mirzapur Dist., *vice* Asst. Surgn. Binode Behari Ghose, granted leave.

Asst. Surgn. Nandendra Chandra Mukerji, in charge of the Sadar Dispy., Fatehpur, held charge of the civil med. duties of the Fatehpur Dist., in addition to his own duties, from the 2nd to the 18th Jany.

Asst. Surgn. Shasthiwar Rao, Rai Bahadur, on return from leave, to the charge of the Sadar Dispy., Bareilly.

Asst. Surgn. Prasad Har Churamani, on being relieved of the charge of the Civil Dispy., Allahabad, to the charge of the Sadar Dist. at Rae Bareilly.

BURMA GOVERNMENT.

Asst. Surgn. L. J. Bally left Milly. Prison, Lucknow, 18th Dec.

Asst. Surgn. F. X. deAttades, three months' priv. leave, 8th Nov.

Hosp. Asst. Salik Ram left Civil Dispy., Fort Stedman, Southern Shan States, and assumed charge of the Civil Dispy. Taunggyi, 20th Nov.

Hosp. Asst. G. Francis left Genl. Hosp., Bangoon, and assumed charge of the Civil Dispy., Katha, 5th Dec.

Hosp. Asst. G. Francis left Civil Dispy., Katha, and assumed charge of the Civil Dispy., Wuntho, Katha Dist., 14th Dec.

Hosp. Asst. G. Francis assumed, as an additional duty, charge of the Police Hosp., Wuntho, 14th Dec., *vice* Hosp. Asst. Tijumal Hussain.

Hosp. Asst. Hem Chandra Koyal left Police Hosp., Monywa, Lower Chindwin Dist., and assumed med. charge of the Chin Hills Battalion Military Police, proceeding to Tiddim, 17th Dec.

Hosp. Asst. Tijumal Hussain left Civil Hosp., Wuntho, Katha Dist., and assumed charge of the Police Hosp., Katha, 21st Dec.

Hosp. Asst. Parakhit Chandra Rai left Police Hosp., Bhamo, and assumed charge of the No. 2 Matin Escort at Bhamo, 22nd Dec.

Hosp. Asst. J. N. Roy Chowdry left charge of the Ry. Dispy., Yamethin, and assumed charge of the Ma Valley State Ry. Hosp., Mohayin, 26th Dec.

ASSAM GOVERNMENT.

Surgn.-Capt. E. C. Hare, I. M. S., will be employed, until further orders, as a Superny. Medical Officer in Assam from the date on which he was relieved of his duties as Offg. Civil Surgn. of Kamrup.

Surgn.-Capt. F. H. Burton-Brown, M.B., Med. Offr., 43rd Gurkha Rifles, is, with the consent of the Military authorities to hold civil med. charge of the Naga Hills Dist. in addition to his military duties, 25th Dec.

Asst. Surgn. Pramatha Nath Banarji held temply. civil med. charge of the Naga Hills Dist. in addition to his own duties, from the 8th to the 24th Oct.

Hosp. Asst. Abdul Jalal, a superny. in the Kamrup Dist. is transferred to the Nowgong Dist., and is apptd. superny. under orders of the Civil Med. Offr., 31st Dec.

Sick leave for one month, from the 27th Dec., is granted to Hosp. Asst. Jadab Gobinda Biswas in extension.

Hosp. Asst. Karam Ali Hazarika, whose services were transferred to the Assam-Bengal Ry. Company, was, on transfer into the Govt. service, employed as a superny. at Nowgong under orders of the Civil Med. Offr. from the 9th Oct. 1894 to the 4th Jan. 1895.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Rs. 1. for subscribers and Rs. 2. for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

DEANE.—On 8rd Jany., at Moradabad, the wife of Surgn.-Maj. W. Deane, Civil Surgn., of a daughter.

DENNIS.—On the 22nd Jany. 1895, at Delhi, the wife of Surgn.-Maj. George Dennis, of a son.

HUDSON.—On 22nd Dec., at Tanjore, the wife of the Rev. H. Hudson, M.R.C.S., of a son.

BORAH.—On 17th Jany. at Sibsagar, the wife of Surgn.-Maj. S. Borah, I. M. S., of a daughter.

MARRIAGES.

FRANCIS—D'CRUZ.—On 2nd Jan., at St. Matthias', Vepery, Madras, by the Rev. A. H. Brittain, Chaplain, Charles Frederick Francis, Civil Apoth., North Arcot, to Pauline, eldest daughter of B. M. D'Cruz, Esq., Depy. Collector.

PIRES—Fernandes.—On 19th Jan., at Sholapur, by the Rev. Fr. A. DeMonte, assisted by the Rev. Fr. M. F. De Sousa, Surgeon J. O. Pires, to Marianne, the third daughter of J. L. Fernandes, Esq., of Mangalore.

DEATHS.

CORNELIUS.—On the 14th Inst., at the Station Hospital, Peshawar, Charles Edward Cornelius, Asst. Surgeon, I. M. S., the dearly beloved son of the late Geo. Edward Cornelius, and Mrs. Sara Eleanor D'Luz Vieira, aged 24 years, 4 months and 29 days, R. I. P.

DUCKWORTH.—On 3rd Jan., at Madras, Isabella Duckworth, relict of the late Apothecary John Duckworth, aged 64 years.

NOTICES TO CORRESPONDENTS.

A. L. M. (Jalpaiguri).—We referred your case to the Principal of the Medical College. Dr. Bomford says you must pass the F. A. Examination, attend the Calcutta Medical College for three years, and then appear for your examinations. This concession is allowed to you as you are a licentiate of an Indian medical school. This is the rule: if you wish to have an exception made to this rule, apply to the Registrar of the University of Calcutta.

A. R. C. (Gwalior).—Many thanks. Later on.

P. R. C. (Karnal).—We have already noticed the favorable opinion of the residents of Karnal on Civil Surgeon Marchant's work.

K. R. D. (Chakrata).—Too late for this number.

M. S. C. (Trichinopoly).—Later on.

V. J. R. M. (Manamalkudi).—Your letter will receive early consideration.

H. P. B. (Pachbadra).—As we did not mean to publish your letter, we did not keep it.

W. J. S. (Madhapur).—We will try and find space for your letter later on.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

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Gazettes of the Governments of India, N. W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planters' Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika.—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine—Medical Missions.

Books.—A Manual of Human Physiology: prepared with special reference to Students of Medicine. By Joseph H. Raymond, A.M., M.D. (Publisher: W. B. Saunders, 925 Walnut Street, Philadelphia).

The Carlsbad Treatment for Tropical Ailments, and how to carry it out in India. By Louis Tarleton Young, M.D., B.Ch., B.A. (Publishers: Thacker, Spink & Co., Calcutta.)

A Manual of Modern Surgery, General and Operative. By John Chalmers DaCosta, M.D. (Publisher: W. B. Saunders, 925, Walnut Street, Philadelphia).

Report of the Sanitary Commissioner with the Government of India for 1895.

Literary Contributions and Letters from: Surgn.-Lieut. R. H. Elliot, M.B., B.S. (Lond.) Madras; W. J. Simpson, M.D., M.R.C.P., D.P.H., Calcutta; Asst. Surgn. H. D. Pant, I.M.S., Oudh; John E. Panioty, L.R.C.P. (Lond.), L.R.C.S. (Edin.), Calcutta; Manmatlanath Chatterjee M.B., Calcutta; Joseph Benjamin, C.M.S., Ahmedabad; Surgn.-Capt. C. W. R. Healey, A.M.S., Lucknow; Surgn.-Capt. W. P. O'Gorman, I. M. S., Midnapur; Arthur Neve, F.R.C.S., Kashmir; R. M. Mahajan, B.A., Rajkot and others.

THE SERUM TREATMENT OF PHTHISIS.

THE treatment of phthisis by the serum of asses is discussed at length by Dr. Arthur Gamgee (*The Lancet*), who has personally investigated Dr. Viquerat's claims. The theory upon which the treatment is based is that the ass and the mule are almost absolutely immune to tuberculosis. Hence their serum will confer an artificial immunity against diphtheria. Viquerat admits that asses may be inoculated with tuberculosis, but they have the disease mildly and always recover. He increases their immunity by inoculations of tubercle bacilli. On the forty-fifth day, when spontaneous cure has already been more than completed, the animal is used to supply the curative serum. With this object it is bled, and the blood is allowed to stand over ice, so as to allow it to clot and to permit of the separation of serum. To this serum from 0.5 to 0.75 per cent. of carbolic acid is added, and it is then stored in stoppered bottles until required for use. About twelve cubic centimetres are injected every third day. Viquerat states that when the immunized serum of the ass or mule is injected every second day into guinea-pigs, which have been fifteen days previously rendered tuberculous by the inoculation of active tubercle cultures, the tuberculous glands which had become enlarged and perceptible rapidly become smaller and disappear, while the animal, instead of dying fourteen or fifteen weeks after the inoculation, regains perfect health. Twenty-five cases of human tuberculosis are reported, but the results of the treatment are not yet very brilliant.

Original Articles.

Sanitation in India.*

By SURGEON LIEUTENANT-COLONEL W. G. KING,
M.B., D.P.H., I. M. S.

*Being the Presidential address to the Public Health
Section of the Indian Medical Congress.*

ON first being informed that the Health Section of this Congress had done me the honor of electing me President, I necessarily felt a doubt as to whether I ought to accept so responsible a position for which I cannot help feeling I am ill-fitted. I, however, understand that our Bengal brethren, with whom the happy idea of holding this Congress originated, have, as far as possible, reserved for their visitors all posts of importance. It is thus I find myself possessed of the pleasure of being first President—let us sanitarians say whilst at a safe distance from enthusiasts in other branches of our glorious profession—of the most important section of the first Indian Medical Congress. Allow me, gentlemen, to thank you sincerely for the honor afforded me, and, if I may be permitted to so regard it, the Presidency in which I have the privilege to serve.

Although this is the first Medical Congress in this country, it is doubtless not the first time that wise heads have been shaken in the discussion of matters sanitary. The laws of MANU could not have seen the light, unless there had existed in ancient India, a section of the educated classes who regarded sanitation as of so great moment that, to bring it home to the masses, it was desirable to weld its laws with their religion. None but men possessed of strong sanitary instincts would have considered it necessary to render it illegal that filth should be brought near them, or would have taken care that those following noxious trades, and the "great unwashed" generally should not approach them. It is true these sanitary laws are known as "rules of caste," but neither their origin nor intention can be mistaken. Were the most recent refinement of scientific research—the bacteriologist—to have it all his own way, I verily believe we should find ourselves bound down by rules as rigid as those of caste; none but men who on penalty of excommunication from the guild were in the habit of completely washing their bodies and clothing a certain number of times daily, who would undergo special purification and a stage of segregation if by force of circumstances brought in contact with unkindly microbes, would be permitted to handle our drinking vessels or prepare food for us. We should find it necessary to purify ourselves carefully after our clins had been handled by the barber, or we had attended a funeral; we should all be bound to prevent saliva, excrement, blood and other distilling matter reaching our public water-sources; we should regard sunlight and the "living earth" as the great purifiers. Laws such as these must in their day have been of vast benefit to the members of the guilds which were called upon to live in the midst of an alien and, apparently, not over-cleanly race.

The Hindus, however, by no means possessed a monopoly of a belief in sanitary laws. Mahomedans brought with them the dicta that "cleanliness is the key to heaven," and that "the preservation of the life of man is but second to the command of God." In this matter, they did not halt at mere theory, as witness the magnificent infiltration galleries, and distribution of enormous volumes of pure water in pipes under pressure in Aurangabad, Ahmednagar, Burhanpur, and other localities. In proof of the fact that these works, designed by the Sanitary Engineer of the period before cast-iron pipes had been dreamt of, have fulfilled their function, I may mention that the city of Aurangabad—although the protection of its water-supply is by no means perfect according to modern notions—has, during the 300 years of their existence, been remarkably free from cholera. Indeed, it frequently occurred that, whilst the neighbouring British cantonment suffered severely, the city of Aurangabad, within a mile of it, remained fairly free. The reason for this comparative immunity being self-evident, in that in the one case a much-defiled stream is the water-source, in the other a partially-protected supply from a good origin, the enlightened Government of H. H. the Nizam lately sanctioned the opening of water-works for the cantonment. It is a curious commentary upon the principles pursued in these ancient sanitary engineering works, that MR. MARRETT—the able Engineer for the modern works—has also drawn his supply from infiltration galleries, the data as to the yield of which he was aided in calculating by an examination of those formed three centuries ago by MALIK UMBER and AURANGZEB.

But it has been with Hindus and Mahomedans alike, as it has been with the Jews—the other instance where hygienic laws had been knitted to religion—the letter of the law has been fulfilled, but the spirit has been forgotten; thus, alas, the India of to-day is a by-word amongst the nations as to neglect of sanitation, and is regarded as the home of that much-dreaded pest—cholera. Hence it is in this country, there exists an enormous field for the labors of that modern branch of the medical profession which we recognize as sanitation. Well may the qualifying term of modern be applied to this science of the West, when compared with the rules of caste of the East with which there is so much akin. The great cholera scare in Great Britain of 1849 pointed to the necessity of concerted public action where grave epidemics were feared; the waste of human life and the hardships to which our troops were subjected in the Crimea, taught the public the necessity of attending to the warning voice of hygiene. As you all know, the outcome of this movement was a demand that our soldiers, when called upon to risk their lives for their country in fair fight, should not be condemned to die by disease born of filth and engendered by ignorance. This was responded to by the appointment of a Royal Commission, and the founding of the Army Medical School at Chatham and, subsequently, Netley. When quiet times succeeded the troublous days of the Indian Mutiny, officers trained in these schools at the feet of that noble and learned man, the late Professor PARKES, could not fail to be imbued with his unselfish spirit, and thus whilst on the one hand they toiled in the various civil stations to which they were attached to start medical

* Sent to the printer for publication.

institutions, on the other, they did not forget their duty as sanitarians. They formed Sanitary Committees whose constant representations to the authorities as to the conditions of the civil populations, resulted in the birth of Municipalities and Local Fund Boards, charged with the sanitary administration of urban and rural areas, respectively. Under their care also, rose great medical schools, which have afforded training to the important class of private medical practitioners which now shares with the Indian Medical Service the responsibilities of medical and sanitary work in this country, whom we have the pleasure in this Congress of welcoming as valued colleagues, capable of aiding us with their experience and advice in the common object of sanitary reform. These advances were made slowly, but, during the last 15 years, the progress of hygiene has been in geometrical proportion. Investigations in the various sciences which go to make hygiene are now pressed forward with feverish haste, and we no longer wait till the experimenter has settled with his publishers for a book to see the light, perhaps a year after the completion of his work; we demand that intelligence shall be sent us by wire, and brook no delay in being told that KOCH has discovered the bacillus of tubercle; KLEIN the streptococcus of scarlatina; PASTEUR an inoculation against rabies, and HAFKINE against cholera; that HANKIN has demonstrated a new toxic-albumin, and SIMPSON the true origin of vaccine lymph; that MANSON has taught us to dread the mosquito, and CUNNINGHAM to think less unkindly of the comma bacillus; that the Incid pen of HART has stirred the length and breadth of the civilized world in demanding better sanitary care of the "home of cholera;" and that Miss FLORENCE NIGHTINGALE preserves intact her sympathy with sanitary advances in this country.

The Royal Commission of 1863, to which India is so greatly indebted for its awakening into sanitary activity, declared that the mortality of the European soldier was equivalent to 69 per 1,000 amongst the men, and 31 per 1,000 amongst the officers; while in 1860-61 in jails for native prisoners the mortality was 67.0 *per mille*. I need not trouble you with a statement of what the mortality was amongst the civil native population, as our registration statistics were at that time, and are up to date, far too defective to enable trustworthy figures to be furnished. In accordance with the advice tendered by the Royal Commission, advising bodies were, in 1864, attached to each Government in the form of Sanitary Commissions. In 1866 these were replaced by single officers—Sanitary Commissioners. Under their advice, radical improvements were made in the dietaries, in the buildings, and precautionary methods pursued in barracks and jails. The death-rate of the European soldier is now about 12 *per mille* from all causes, and that of our native prisoners about 29 *per mille*. These results are undoubtedly highly satisfactory, and can be ascribed to no other cause than the placing of the populations concerned under improved hygienic conditions.

In regard to jails, although here and there minor insanitary conditions still exist, it may fairly be said that, as to diet, labor, and dwelling accommodation, the native prisoner is well off. I do not believe the same can be said so fully either of the British soldier or native sepoy. The period of progress inaugurated in 1864 has not been consciously maintained. Typhoid fever claims far too many

victims for it to be imagined that the surroundings of the British soldier are free from reproach; for he forgets that THOMAS AKEINS has his own little ideas of what is good for his internal economy, and imbibes without thought of its origin, vile "cool drinks" prepared for him in the bazaars; but we cannot well regard this—albeit preventible cause—as sufficiently explaining our losses. In the matter of food-supply, which demands the special knowledge, not of the medical man only, but also of the chemist and analyst, our Army authorities have become impatient of control or suggestion by the medical profession, and we find the modern tendency is to attempt to educate military officers to do the work of the sanitarian; so that, except at the expenditure of much representation and the risk of considerable opprobrium, it is impossible for the medical officer to reject, that which the combatant officer officially responsible for food inspection, has already passed. It is highly desirable that military officers should possess the training indicated, just as it is also desirable that medical officers should have sufficient military training to defend the wounded or themselves in desperate positions, as they have so often managed to do without possessing that advantage. But, whilst I would demand that in action the lives of soldiers should be entrusted to professional combatants, it seems but meet that all matters affecting health should be under as complete control by the sanitarian as the exigencies of military service would permit. Recent reports by officers of the Army Medical Staff have shewn that the dry-earth method of night-soil disposal in certain cantonments is far from being above suspicion. Nor, in the more grave matter of water-supply, have our cantonments, in the generation that has elapsed since the appointment of the Royal Commission, been placed in a completely satisfactory condition. In two at least of our important military stations in the Madras Presidency, the water-supply is such as to leave little room for doubt that, however much the soldier is himself to blame in contracting typhoid by his gustatory peculiarities in the midst of the bad hygienic conditions of native bazaars, there is ample room for his contracting the disease nearer his barracks.

In Bangalore, the troops are provided with water from a tank which is supplied by an open channel that passes through a native bazaar, but is duly kept clean by means of sweepers, whose services, be it noted, are considered necessary. Forming part of the wall of the supply channel is the main sewer from the same area. This sewer is ingeniously arranged, so that when over-charged with storm water—brought thither by open drains which are destined normally to receive the sewage from native houses—relief is obtained by discharge into the water-supply channel, and thus into the tank. We are consoled by the statement of the Engineer authorities in charge, that overflow only occurs about five times per annum. Again, in Madras the so-called "Seven Wells" water is supplied to the British troops. This water has been pronounced "bad" by the Madras Chemical Examiner, whilst a sanitary survey shews that enormous collections of rubbish containing focal matter deposited by the Municipality sewage farms, and graveyards, are within the same sub-soil sheet as the sources. Both in Bangalore and in Madras the British troops have suffered from typhoid fever. They are said to be valued at £100 per man.

But there is one class of disease to which the British soldier is subject, which in the plenitude of the wisdom of Exeter Hall it has been determined that prevention shall not be exercised. In India during 1892, there were inefficient for certain periods during the year 27,000 men, or 410 per mille of the average strength, by reason of admission to hospital for venereal disease; and 206 were invalided from this cause during the year. Yet, by the repeal of certain clauses of the C. D. Act, the hand of Government has been stayed at the instance of a narrow-minded section of the British public. In the name of morality, in the name of Christianity, the erring bachelor has been dealt with on the "serve-you-right" policy, possible only of adoption by minds devoid of the power of recognising in what true humanity exists. To what punishment would not these purists condemn the man who having warned his child that if he played with fire he would burn himself, complacently saw it commit the act of disobedience and literally be done to death; yet, the policy of non-interference entails present suffering in our fellowmen and their companions in immorality from a disease that may be transmitted to a wife and the innocent infants of a future union. I know of no law of God or man that can give countenance to a policy so cruel. The only possible excuse that can be offered for the leaders of this movement is that they hoped that fear of acquiring disease would act as a deterrent. In this they have exhibited gross ignorance of the laws of Nature; not the biggest scare-crows ever made—and the soldier is aware that the dangers are real enough—would quench human passion. Neither can it be pleaded that the measure protects women from falling. On the opposite, a system of supervision prevents many from subjecting themselves to degradation so manifest, and must often have saved those from final ruin whose wings have been singed. In my opinion, the result of the repeal of the law has been to extend the circle of immorality, and to bring within the area women who might otherwise have escaped. Nothing short of the moral training that would demand that mankind be "temperate in all things" can afford the result arrived at, and it is to this end, combined with endeavours to make gymnastics and all manly exercises receive far more encouragement than at present at the hands of the authorities, that all efforts should tend.

The sanitary conditions under which the native troops serve are certainly much superior to those of the average civil native population, and undoubtedly, the small mortality, and especially their comparative freedom from small-pox and cholera, exhibit the results of the supervision exercised. But in respect to native followers, there can, I think, be little doubt, that defects exist. An army wasteful of its transport animals must suffer seriously in the long run, to say nothing of the enormously increased cost to the country employing them. The last Afghan war seems to have taught the necessity for care in this particular, and officers and men now receive training as to loading and unloading that was before little thought of. But I have failed to see any precautionary measures suggested, or adopted, as a result of the loss of life amongst native followers which occurred in the various expeditions of late years in Burma. I cannot here take up your time

with details, but I would ask those who have interest in these questions, to balance the diet, fuel allowances, and shelter provided for followers, against the work expected of them as weight-carriers on lengthy marches, and compare these data with those applicable to native combatants employed side by side with them, and ascertain for themselves whether there does not exist some physiological error which in part accounts for the invaliding and death-rate of that useful class of men. In my humble opinion, these matters should have been carefully sifted, and the medical and sanitary experience gained from our little campaigns in Burma should have been made available for possible heavier struggles in the future.

In the case of troops and jails, it is but demanded that the sanitarian should convince the ruling authorities as to the necessity for action, for the latter to find funds and issue orders. With the civil population, the problem is, however, much more complex. It embraces questions as to the sanitary discipline of 212 millions of people inhabiting the most diverse climates, speaking different languages, possessed of different customs, and, above all, bound hand and foot by prejudices which they are but too apt to confuse with religious instincts. Undoubtedly, the foundation of all sanitary efforts must be the existence of suitable laws to support the sanitary executive. Since 1863 we have seen laws passed under which municipalities and local fund bodies have sprung into existence; these, in their infancy, were largely controlled by Government officials, but of late years, under the Local Self-Government movement, have been placed in the hands of representative native gentlemen. In the case of the Madras Presidency, the Act dealing with the rural tracts has already, since its inception in 1871, undergone one revision, and is now being remodelled by Government. The same is to be said of the District Municipalities Act. For the large town of Madras, revision of the special Act applicable, has also been accomplished. These alterations were largely prompted by the necessity for increased sanitary procedure. In regard to fairs and festivals, increasingly stringent regulations have had some influence in diminishing the appalling loss of life, which the insanitary conditions under which most of them used to take place brought about; but, on this point, much remains to be done. Careful records of factors affecting the health of populations, as to the progress of epidemics, and sanitary subjects generally, may be reckoned by the lakh. Attempts to ameliorate existing conditions by petty expenditure, and the giving of advice have also everywhere been made in our rural tracts and minor towns. The Vaccination Department has not been idle, and has made its influence felt upon mortality distinctly; but no one has yet been able to convince the Government of India that the employment of a poorly-educated and ill-paid vaccination staff throughout the country, is incompatible with the attainment of full results. In rejecting a scheme for employing medical subordinates in the Madras Vaccination Department in 1868 the Government of India informed that of Madras, that "the duties" of vaccinators "are purely mechanical," and the rates of pay proposed "are needlessly high, from a desire to attract men of education and respectability such as are not required, inasmuch as

they would be a more expensive agency than is requisite for the purely mechanical duties of vaccinators." During the last 64 years in the Madras Presidency, 201,304 deaths were registered from the preventible disease of small-pox. Taking into account the probable number of survivals from these attacks at 64·3 per cent., it is calculated that—without taking into account the capitalised value of lives—there must have resulted during sickness and upon funeral ceremonies an unproductive expenditure of 51 lakhs of rupees, if it be presumed that the persons attacked occupied no higher position than the cooly gaining Rs. 5 per month.

But in the practical application of sanitation, outside the limits of the capitals of the various Governments, our advance has been but little. Unfortunately for the country, it was possible for those responsible for this absence of progress to shelter themselves behind a motto that was so frequently applied to the Sanitary Department that it became a part of the sanitary creed of the day. There were, it was repeatedly stated, prejudices to overcome; therefore *festina lente* must be the guiding principle. The phrase saved much labor, and it became the business of no one to enquire whether these prejudices really were of so serious a nature as to clash with the people's more deeply-seated and legitimate opinions of religion, and—it saved money. Year after year, it was pointed out that if the principles evolved from the investigations of the sanitarian were to be given effect to, specially trained Engineers to execute sanitary schemes, in consultation with Sanitary Commissioners, were requisite. At last the Secretary of State acted upon these recommendations, and the majority of local Governments are now provided with Sanitary Boards having a Sanitary Engineer as a member. Further, the important principle that Government must aid sanitary advance by direct allotment of funds has now been conceded, and local Governments are responding to the call; in the Madras Presidency the Government has, since 1890, in the manner of free grants to Municipalities, given the sum of Rs. 13,05,850, besides advancing loans upon very favorable interest to Municipalities for drainage and water-works: 1888—the date of the Secretary of State's despatch on these subjects—may well be reckoned a new era in the sanitation of India. Since this period we have seen the North-West Provinces busy in the revision of its sanitary laws, especially with reference to the accommodation of pilgrims; a Village Sanitation Bill has been essayed in Bombay; and Bengal, under that ardent sanitarian, Sir CHARLES ELLIOT, has excogitated large drainage schemes that, aided by legal measures, are directed against the greatest cause of mortality in this country—malaria: these are measures of the most practical nature which must be far-reaching in their life-saving results. We have seen a well-known bacteriologist appointed at Agra, and to the Sanitary Commissioner with the Government of India a special assistant for bacteriological enquiry, has been attached. Methods of intercommunication between presidencies and between neighbouring districts as to movements of epidemics have been successfully organized. In numbers of the larger towns drainage and water-supply works are in actual progress. But it would be folly to consider there have been

made efforts commensurate with the great work of life-saving before us.

Although, as I have shewn, it has been possible within the last few years to throw off something of the glamour of that thread-worn proverb, there is still enough of the old spirit of *festina lente* prevailing to clog the wheels of progress, and to limit the fuel, the consumption of which makes this machinery exhibit its full value; I refer to that useful article—money. Schemes for sanitary improvements are still built toilfully, yet in hope, are launched upon seas of unbelief, and are wrecked upon the shores of finance. In short, sanitary advance is constantly frustrated by the cry "no funds." In this great assembly of sanitarians representing opinions from all parts of India and of Europe, we may well be permitted to ask without being taxed with captiousness, or, in the case of those occupying official positions, insubordination, whether it really be that no funds are available, or that Government has not yet arrived at a sufficient grade of faith in sanitation to devote to it its fair share of funds. I maintain that sanitation neither receives its fair share of funds, nor that place in the Government of the country that it merits.

I have had no time to enter into statistics on this subject in other presidencies, but taking the case of Madras, I find that from Provincial Funds the average amount spent directly upon sanitation during the last five years was Rs. 44,660 or 0·15 per cent. of the total funds. This expenditure is for a Sanitary Commissioner, aided by a single deputy, who also, under the former officer, is in charge of the Vaccination Department, *plus* an office staff. This represents the total staff devoted solely to sanitary purposes and paid from Provincial Funds, for the care of about 36,000,000 people and an area of country about 141,189 square miles. But for education during the same period, it was found necessary to allow an average of Rs. 12,21,230 per annum or 4·1 per cent. of the total funds. It is further noteworthy that, whilst expenditure on the sanitary staff remained practically at the same figure, for education it has year by year steadily increased, so that although, in 1883-84, Rs. 9,52,778 was thought sufficient, in 1892-93, Rs. 14,06,352 was demanded. This sum includes grants to local bodies and the pay of a Director of Education, who gets a salary of Rs. 2,000—2,250 per month, has a suitable office staff, *plus* an admirable staff of assistants in the form of Inspectors, Assistant Inspectors and Sub-Assistant Inspectors, male and female.

In this statement of expenditure from Provincial funds, no account is taken of grants for buildings for educational purposes, which in the Presidency town alone cost Rs. 13,94,356. The Government has remained so convinced as to the necessity for this outlay, that it has felt it desirable, in the interests of economy, to issue its orders from an ancient building, which is a cross between a barrack and the office of a commercial firm—affording a decided contrast to the magnificent educational buildings such as the Presidency College, the Senate Hall, and Law College which are in its proximity. Even were the provincial grants to Municipalities I have mentioned taken into account, the percentage from Provincial funds for sanitary works and sanitary staff would amount to 0·37 against 4·1 for education, excluding grants for works and buildings.

For 1898 the Educational Department ceases its demand for money only from Provincial Funds. It duly asks and receives its share from Municipal and Local Funds. I find that in 1898, the Educational Department spent from Provincial and Local Funds Rs. 21,32,281 against Rs. 7,88,000 devoted to sanitation, or a proportion of 8.4 per cent. against 2.0 per cent. of the total funds. On combining the figures for Provincial Funds, Local Funds and Municipalities, it is found that education consumes 5.5 per cent. against 3.0 per cent. for sanitation. As far as it has been possible to effect this from the data available, this sum represents net expenditure. The amount spent in sanitation represents the maintenance charges for conservancy staffs and the upkeep of plant for a population of 36,000,000.

There are doubtless other departments which also receive more than their fair share of available funds, and thus tend to render sanitary advance impossible; but I have utilised this instance, as the Educational Department of Madras has long been subject to the well-merited criticism of over-production, whilst like OLIVER TWIST it for ever demands more. In the Madras Presidency, notwithstanding the popular opinion outside our limits that we are "benighted," the land is flooded with B. A.'s and Vakeels; or, in other words, with educated men. The best evidence of over production is the market value of any article, and I may state that the finding of employment of any sort for University graduates is so difficult that they willingly accept posts on pay little better than that of a good class of domestic servants, whilst with Vakeels the earning of a living in strict accordance with legal ethics is becoming increasingly difficult, notwithstanding the extraordinary fondness of the people for litigation. But it may be said that education is the best ally that hygiene could have, and but paves the way for sanitary advance. Well, I have carefully watched results, and have attempted to believe that this is so; but I am driven to the conclusion that this theory must be accepted with reserve. Whilst, doubtless, education has given to us in every part of the country consistent and earnest advocates of sanitation, in a large number of cases practice and theory do not go hand in hand. The average educated man will not scruple in the morning to proceed to the river-side or tank, and perform there his complete toilet, using water that he sees is undergoing contamination within a stone's throw by his male and female brethren; although, in the evening, he will fully grasp the refined hygienic details of the evil results of early marriage, and will give his vote at crowded meetings as to the abolition of the nautch girl. Not only has the Educational Department been guilty of over-production in the higher branches, but they have committed the fatal error of neglecting sufficiently to advance female education. It has apparently been forgotten how powerful and obstinate an advocate the female part of the population is of various superstitious customs. This neglect has rendered it almost impossible for educated natives to carry into their every-day life the practice of sanitation, of which they have duly learnt the theory. In the mental culture of women I, therefore, think has a far more legitimate field for spending of public money than in the over-production of Vakeels and B. A.'s. But, irrespective of this great impediment, it is manifest that

large as the number of educated men is, their influence upon the masses can be but small; where this can best be felt is almost solely in the large towns—the rural population representing the bulk of the people being practically beyond their sphere of influence. This mistake is beginning to dawn upon the public, and the Madras Government is now doing its best to favor primary and technical education—just where their predecessors' efforts should have commenced. This form of education, which will raise the status of the lower classes and assist in developing the long-neglected natural resources of the country, doubtless will effectually aid sanitary advance, and, were it to be understood that the new scheme is to be pushed forward by retrenching the useless expenditure upon over-production in the higher classes of education, the movement would have the full sympathy of those interested in sanitation. But there is every reason to believe that the charges incurred will form increased increments against funds that might otherwise be available for sanitation. If to "hasten slowly" has been the principle enunciated for the guidance of the Sanitary Department, "the people die not slowly; therefore be philanthropic and hasten their education" has been that unconsciously acted upon as regards the Educational Department.

In speaking thus, it must not be imagined that I would prefer not to see the country overrun with highly-educated men. Provided these gentlemen could get a living satisfactorily to themselves, their existence is a distinct factor in the advance of the country; whilst socially their mental culture makes acceptable comrades and friends of men, who would otherwise be incapable of exchanging an idea with their fellow-beings of the West; but I certainly think the time has come to consider, in view of over-production and the more pressing claims of the population upon Government for the preservation of health and decency, whether the higher class of education should not be secured by those desiring this luxury otherwise than at the hands of an elaborate department receiving pay and pensions from Government. I need not say we do not grudge our fellow-officials of the Educational Department the success which has attended their efforts, to persuade Government to give them so large a proportion of the sinews of war. The Sanitary Department has just as great opportunities to plead the cause of sanitation as they have possessed as to education, they have succeeded where we have failed. It is obviously to remedy this state of affairs that we must exert ourselves. If we believe in the enormous importance of hygiene in the saving of human life and suffering, we as a body and as individuals will not rest until we see this country provided with a better share of funds and correctly-organized Public Health Department, capable of investigating and dealing with the causes of disease, and supervising and controlling the methods of expenditure upon sanitation. In undertaking to secure these ends, we may well consider it our duty to press forward at the risk of being regarded by the public as mere "faddists," and men possessed of not the slightest comprehension of what the demands upon State are. This, however, we can well afford to brook. We aim at securing no public praise, but at the attaining of the ample reward—even to a greater measure for which our brethren engaged in medicine and surgery are willing to toil by night and by day; the pleasure of

being the instrument, in God's hands, of relieving suffering and saving life. For the sanitarian is reserved the joy not of seeing the solitary weakly patient day by day gather strength to resist the onslaught of death, but of saving lives that may be counted by thousands; for him is reserved the happiness of seeing where before the unkept street Arab revelled in filth appear a new generation in the full vigour of health, and where disease, poverty and vice reigned supreme, to find instead temperance, happiness, and wealth enthroned. Here is true philanthropy; to those who have felt this pleasure there can be no wonder that the ancient religions of nations have little else in common were united in finding a place for hygiene; for its first dictate is respect for the rights of our neighbours. It is thus that hygiene claims a fraternity from which neither Christian, Hindu, Sikh nor Mussulman, Socialist nor Autocrat, can with a clear conscience hold himself aloof. Under the banner of hygiene, we are capable of knitting together every race and creed, because we labor for no selfish purpose—we endeavour to secure to man God's greatest blessing—health: we labor to preserve His most precious gift—life.

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INDIAN SYSTEMS OF MEDICINE.

By BRIG.-SURGN. LIEUT.-COL. T. H. HENDLEY, C.I.E.

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THE following paper was read at a previous meeting by Brigade-Surgeon Lieutenant-Colonel T. H. HENDLEY, C.I.E., Residency Surgeon, Jeypure.

When it was first suggested to me by the President of the Congress that I should write a paper on the Indian systems of medicine, I replied that I thought it would be better to entrust the subject to some one who had a wide acquaintance with original works in the ancient and modern languages of India, but it soon occurred to me that sufficient information on the subject was already available in English to render it almost hopeless to expect that anything new or of much value could be acquired in the short time at the disposal of members for writing papers. Moreover, I thought that a study of the ancient systems would be of most interest if confined to an attempt to discover whether they had succeeded or failed, and how much they had affected the present practice of medicine in this country, as well as how far they still prevent the general acceptance of modern Western medical science. It was my belief that many lessons might be learned from this enquiry, some of which at least might be of use even to physicians and surgeons who practise after the most approved modern methods. The consideration of the subject involves not only a rapid survey of the ancient practice of the medical art in India among the most educated Hindus, Mahomedans, and Parsees, as well as, perhaps, among the peasantry, but also of the treatment which the people still receive. There remain also for consideration the reactions of the different systems upon each other, the effects upon them all of religion and superstition, and lastly the results of contact with European science, and with what for a time may prove even more powerful, European quackery. I shall also have to ask whether European physicians can do more than they do

at present to increase the knowledge of their art among the people of India and to remove any prejudice against it which may exist.

The subject is so vast that in the very limited time allowed me I can only take a very superficial view of it. The history of medicine among the Hindus and Mussulmans has been treated at more or less length by numerous authorities. A list of the principal of them up to the year 1876 will be found in a small book entitled "The Vaidan and the Hakim" by the late Surgeon-General EDWARD BALFOUR. As regards the Brahmanical Hindus, the best summary is that of WEBER, the English translation of whose lectures, dated July 1878, is the latest to which I have access.

Later authorities doubtless exist, but it is hardly necessary to refer to them for my purpose. WEBER states that we find, especially in the Samhita of the Atharvav, a number of songs addressed to illnesses and healing herbs, from which, however, there is not much to be gathered. Animal anatomy was thoroughly understood as each separate part had its own distinctive name and ALEXANDER's companions extolled the Indian physicians especially for their treatment of snake-bite.

The Indians consider medicine as an Upaveda which they expressly entitle Ayur Veda. This is known only from extracts in the commentators of whom CHARAKA, who may be spoken of as a physician, and SUSRUTA, a surgeon, were the earliest and principal. The works of these writers existed before the 8th Century A. D., as, according to Ibn Beithar and Albiruni, they were translated into Arabic at that period.

WEBER goes on to quote references which presuppose an advanced cultivation of medical science, but there is nothing very definite as regards the early period. He observes, however, that the number of medical works and authors is extraordinarily large. The former are either systems embracing the whole domain of the science or highly special investigations of single topics, or lastly vast compilations prepared in modern times under the patronage of kings and princes. The sum of knowledge embodied in their contents appears to be most respectable. Many of the statements on dietetics and on the origin and diagnosis of diseases bespeak a very keen observation. In surgery, too, the Indians seem to have attained a special proficiency from whom he thinks Europeans might learn something as they have done in the case of rhinoplasty.

He thinks that "the branch of *materia medica* appears to have been handled with great predilection, and concludes that during the last few centuries that medical science has suffered great detriment from the increasing prevalence of the notion, in itself a very ancient one, that diseases are but the result of transgressions and sins committed, and from the consequent very general substitution of fastings, alms, and gifts to the Brahmans, for real remedies." He refers to the excellent commentary on Hindu medicine by Dr. WISS, and in conclusion holds that European physicians must have much esteemed the Indians down to the seventh century as Arabian medicine constituted their chief authority, and was itself much indebted to the Hindus.

In a note on WEBER's work HALL is represented as being quite opposed to the high antiquity of Indian medicine as

the sources even the most ancient texts to Arabian sources. The subject is extremely interesting, and our Indian members may add much to our knowledge of it by translating the best works.

DR. BALFOUR refers to the statements of CHARAKA and SUSSUTA and the early commentators that without a knowledge of books, coupled with practical dissection, no one can be a proper practitioner, and remarks that "these sound views afford the explanation why the ancient system of Hindu medicine was so complete, and has been so permanent in its character."

Everyone knows that the Hindus, from a very early period, have given up the dissection of bodies merely because it may occasion ceremonial uncleanness. Such prejudices did not exist in former times, and even Manu lays down that mere bathing will purify one who has touched a corpse, while stroking a cow or looking at the sun, having duly sprinkled the earth with water, will remove the defilement due to touching a dead bone.

In the present day so great is the terror of dead bodies that I have found it necessary to put up a notice in the Jeypore Museum on a case containing an Egyptian mummy to the effect that any visitor who has objection of the kind should avoid touching even the glass frame work, otherwise he might feel it necessary to undergo a long ceremonial washing. Some Hindus go so far as to think a mere look defiles. The Hindus believed in the doctrine of Humoural pathology, and considered that diseases were due to aberrations in varying degrees, of the three humours, air, bile, and phlegm, (bat, pit, and kuf). They endeavoured to restore the balance by careful dieting or elimination of the corrupted humours by means of emetics, purgatives, and blood-letting. There was a further division into sthenic and asthenic diseases which needed cooling remedies or the reverse.

The Yunani or Greek system, which is practised by Mahomedan hakims or physicians, is the second important division of medical practice in India. The chief light of this faith is AVICENNA (ABU-ALI-SUNA) who borrowed largely from Galen. His great work on the principles of medicine the Kitab-ul-Qanun-fi'l Tibb, is still a standard-book in all countries in which Arabic is known.

This system is mainly that of GALEN. Disease was due, he considered, to disproportion in the four states of the constituent elements, namely, the hot, the cold, the moist, and the dry, or to some natural condition of the organs.

He believed in the putrefaction of the humours which required elimination of the offending matter.

The Arabs borrowed from the Greeks and perhaps from the Hindus, hence the great point of similarity between the different schools, but the practices of excessive purging and blood-letting are more characteristic of the Yunani than of the Valdic system, though both believe in starving out a disease. Like the Hindus the Arabs did not practise dissection.

From the 7th to the 13th centuries the science of anatomy was stagnant. Indeed for 1,500 years, from about B. C. 300 to B. C. 200 to the year 1815, when MONDINI dissected two bodies, there was no advance in any part of the world in the knowledge of the construction of the human frame.

Both Baidis and Hakims share the prejudice so long common in Europe, against surgery, which they have left

to jarrals or rude uneducated surgeons, to barbers, quacks, and old women of both sexes.

In Europe the church was responsible for the neglect of surgery, as the clergy were prohibited from the practice because it caused the effusion of blood. This indifference was the natural offshoot of the neglect of anatomical study, because men of course, feared to perform surgical operations which might involve immediate loss of life. It is true the Hindu works named 108 marmasthanas or vital spots, but this was of no real assistance to the surgeon. The consequences of this neglect of one of the great divisions of the healing art were terrible to contemplate. The amount of torture inflicted in the rude attempts to reduce dislocations, to set fractures, and stop bleeding, to say nothing of the mischievous use of salves, and irritants to wounds of all kinds was appalling. Anyone who has practised a year or two in India can give numerous examples of such malpractices. During the past year or two I have seen an attempt to drag out the upper fragment of the femur in case of compound fracture, because it was mistaken for a piece of wood which, it was supposed, had entered the limb, and I also know that several lives have been lost from tight bandaging in fracture within my experience, in a remote part of India, the stumps of amputated limbs have been thrust into boiling oil to check hemorrhage. This was the practice in Europe before the time of AMBROSE PARE, who first used or revived the use of the ligature to stop bleeding from the arteries.

There have been many specialists for particular surgical cases as, for example, SATHYAS who practise reclinatio for cataract entirely after the old Greek method; men whose only occupation is to restore noses from the forehead, notably at Kot Kangra; lithotomists, such as a man whom I once met in Marwar who removed calculi with a rude hook and a scalpel by cutting through the rectum towards his finger with which he forced the stone forwards; or another individual, a retired sowar, an operator in midwifery cases, who on one occasion amputated the arm in a shoulder presentation and then fled. Then again there are knowing men with cattle, or blacksmiths who attempt the reduction of dislocations on human beings as they do with oxen, and dealers in weapons and armour, who think, because they know how to make arms, that they ought also to be acquainted with the best modes of treating the wounds which are inflicted by them. The Parsees do not seem to have had much influence on the practice of medicine in India, or to have taken much interest in it until their more intimate association with Europeans. They had in ancient times a firm belief in spells and charms, and probably in medical as in many other matters. After they came to India they received much more from the Hindus and Mussalmans than they gave.

According to DARMESTETER the Zoroastrians held that "sickness being sent by Ahriman, the evil principle, ought to be cured, like all his works, by washings and spells, hence the medicine of spells as most powerful of all. Although it did not oust the medicine of the lancet and that of drugs, yet it was more highly esteemed and less mistrusted."

There is one curious section in the Zend Avesta regarding the men who wished to practise the art of healing. It was laid down that those who used the knife were to operate on the worshippers of the Davaas first of all. If a

man lost three patients in succession he was considered unfit to practise the arts of healing for ever and ever. If all recovered, he might then cut the orthodox who revered MAZDA and heal them at his will. The penalty for wounding the worshipper of MAZDA before the surgeon became qualified was the same as was paid for wilful murder.

The orthodox Hindu, moreover, according to the Amrit-Sagar, was to try his skill with the ancent in the first instance on bladders.

The chapter in the Zend Avesta on fees is also interesting. A priest was to be healed for a holy blessing, the master of a house for the value of an ox of low value, the lord of a borough for an ox of average value, the head of a town for one of high value, and the chief of a province for the worth of a chariot and four. The fees for healing the wives of the above, from the master of the house upwards, were the cost of a she ass, a cow, a mare and a she camel respectively. Among those who used the knife or healed with herbs or the holy word, the last was the one who was best able to drive away sickness from the bodies of the faithful. Here again we see that to faith is attributed a higher power than the art of the physician.

I am informed by MR. VACHA, the Principal of the Maharaja's College at Jeypur, that, before his countrymen put their faith in modern Western principles, they had Baidas and Hakims of their own, the most famous of whom lived at Surat, and that certain Parsi families have at the present day the surnames of Baid and Hakim, which were adopted on account of the profession of their ancestors. In Surat and Broach there are still practitioners of the old school. Their knowledge is hereditary as is the case with that of the ordinary practitioners, both Hindus and Mussalmans, and they generally, he thinks, read Yunani books or rely upon manuscript works which have been handed down to them. Their knowledge is very inferior, though some of them become famous for the successful treatment of, perhaps, one or more diseases for which they have specialties which they are careful to keep secret, and not even to reveal to their sons.

One man at Broach was a *humbag* in other diseases, but could cure dysentery in three days, another at Surat was a famous bonesetter who rarely failed.

MR. VACHA believes that the evil spirits mentioned in the ancient writings of his people really refer in an allegorical manner to the microbes, germs, or bacteria of modern science. Similar views were put forward in a brief sketch of the Zoroastrian religion and customs which was written by MR. BHARUCHA, of Bombay, but these are only speculations which are, perhaps, not more valuable than those which declare that there are indications that electricity and even illumination by means of gas were known to SHAKESPEARE and MILTON.

There are however many notes of great suggestiveness and value in some of the old books which shew much enlightenment, as for example the following from the Khorsbod Yasht, "and when the sun rises up then the earth made by Ahura becomes clean; the running waters become clean, the waters of the wells become clean, . . . all the holy creatures become clean." All bodily secretions are regarded as impure as containing the germs of disease, and cleanliness and bodily purity

(Yaoshdathra) form one of the chief commands of the Zoroastrian religion.

It is not at all surprising that with these ideas the Parsis are very appreciative of the advantages of modern sanitation.

It must not be supposed that Baidas and Hakims have had it all their own way in India in the practice of medicine. The priests of all religions, as in Europe, have thought it their right to heal the sick, not merely by the use of spells, Charms, and texts, but by drugs, and temples have long served as consulting rooms for treatment as much of disorders of the body as of the soul. The most firm believer in a baid does not disdain to follow the advice of a mahant or religious leader, or of a Jogi or devotee whose purity of life and habits of meditation are generally held to give him some insight into the causes, nature, and treatment of disease. In like manner the most pious Mussalmans, and particularly the women, trust in the charm which a sainted *Moulei* or *Fakir* will write for a small coin, and hope that it will aid the more regular exertions of the hakim, and this is not surprising when one knows that some of the most popular practitioners amongst them have been content to feel a pulse by holding the end of a long cord of which the other extremity has been fastened to the wrist of a distant patient in the upper room of a zenana or have framed their diagnosis on the inspection of a *karura*. There are many places where there are neither baidas nor hakims, but only the village *bunesh* or purveyor, the *dhai* or nurse, whose principal avocation is to assist children into the world, and the old men and women of the neighbourhood in whom is stored up the accumulated knowledge of the simples and folklore of the country side. Such is all the medical assistance, for example, that many of the poorest agriculturists throughout the great empire of villages, and the sick among the aboriginal tribes, ever have received. Some time ago I published a list of drugs and a short sketch of the medical procedure adopted by the Bhils in Meywar, and was much struck by the resemblance of the latter to similar accounts of the medical lore of the ancients and of rude people in other parts of the world. On this subject of parallel medicine I began to make some notes, but found the study scarcely worth pursuing, that is from a scientific aspect, though of great interest from another point of view. The early Egyptian papyri, Assyrian inscriptions, old Buddhist manuscripts, Saxon leechdoms, the works of many travellers and the guides to famous shrines in India, or the lucubrations of religious leaders, most of which are full of notes on materia medica, simples, &c., all contain much the same kind of information, which amounts, in most cases, to a grain or two of wheat deeply buried in a bushel of chaff.

Perhaps the belief for charms is the most potent of all influences just now among the vast majority of the people. In a chronic case a man will devote his whole time to a sick boy. Beginning with family recipes, he will next go to the baidas or hakims and supplement their efforts with offering to the gods and in visits to their shrines, which will be tried one after the other; sooner and later, finding no help in man, he sets out with his child for the house of a devotee or *fakir* of popular repute who tells him, to do some simple, it may be even an absurd thing, or give some nameless remedy or other, or breathe upon the child, and then at

last the latter may bring the worn out sufferer to a dispensary but too late, as a rule, for any useful treatment. I think this pretty accurately represents the state of things in India at the present day. It can easily be understood that under such circumstances the quack, whether Vaidic, Yunani, or European, has a magnificent field for the exercise of his powers. I have seen very little reference to this subject but it is an important one, and is decidedly hurtful not only to the progress of European medical science in this country, but to the reputation of even *baid*s and *hakims* of whom some good men, after their own lights, although in a greatly diminishing number, do exist. A few years ago only Holloway's pills and a few well known articles of that kind were advertised or very extensively used in this country. At the present time every post brings to the educated citizen quantities of European and American quack literature, much of it, I am sorry to say, of an indecent character, but it is outdone by the so-called Vaidic remedies, which are described in nauseous pamphlets that find their way into the most remote parts of the country. The worst of it is that much of this rubbish is accompanied by certificates from men who ought to know better, and who hold diplomas from our licensing bodies. The sale of patent medicines, a large number of them really quack products, unfortunately forms part of the business of many of the medical halls in the large towns. I only mention this as a warning to practitioners, because the use of such articles can only tend to make patients, after a time, distrust the physician in whose skill as a prescriber they naturally soon lose faith.

Having given this necessarily very brief sketch of the Indian schools of medicine and of the treatment of the sick in past times as well as at the present day, it is necessary now to consider why these systems have decayed and yet still have such a hold on the faith of the inhabitants of this vast empire, and then go on to ask whether we have any lessons to learn from them and from their success so far as it goes, and also discuss what should be done to promote the knowledge of, and belief in, that which we hold to be a more rational, because a more scientific mode of practice. I think that it must be at once admitted that as long as dissection was practised, the Brahmanical Hindu surgeons and physicians were quite as advanced in the knowledge of their art as their brethren in other parts of the world. They were good observers and careful recorders of natural phenomena, but as soon as they allowed the religion of the Puranic period to interfere with them by its dictum that dead bodies were not to be examined, they lost the only means of testing their observations of true advancement.

To the same defect was due the want of progress of the *hakims*, who, when they adopted the works of Hippocrates and Galen, had a good foundation upon which much might have been built up. The onward march of medicine in Europe was prevented by the same unfortunate prejudice.

Next in importance comes the too great reliance on religious interference, on the idea which has been generally prevalent that disease is a demon which must be exorcised, propitiated or expelled by *mantras* or charms and sacrifices, or by cabalistic practices, and by the deprivation of nutriment through starvation of its host or victim. Most of us will recollect the story of the famous surgeon in the Bagh-o-Babar who opened the head of a demented youth and

relieved him by moving from the surface of his brain a centipede which was devouring that organ.* I have drawings in my possession which were taken from a work on elephants in which each disease is represented by one or more animals who torture the poor beast by sucking its blood at the effected parts or by pressing them violently, as when a snake of fearful size, for example, by coiling itself round the animal's trunk gives rise to frightful neuralgia of that organ.

The wonderful and elaborate working of the ordinary Indian mind which makes so much of details, also finds expression in medicine in the preparation of most complicated prescriptions, such for example as *churns* or powders which contain ten or twenty ingredients; or it sees a fancied connection between the shapes of certain vegetable drugs and diseases. Complicated formulæ of this kind, of course, prevent the results of remedies from being studied with any degree of accuracy, and here again we have only an evil which existed in Europe at one time and had the same results. I remember seeing an old edition of the London Pharmacopæia which was still consulted when I was a student, though it gave recipes for making the celebrated Venice treacle which contained, perhaps, three more or more ingredients, some of them of a most nauseous character. So poorly is the Indian physician paid by the great majority of his patients, in comparison with the sum lavished on feeding Brahmins and beggars, or on expensive drugs recommended by worldly wise priests, and the less conscientious members of his own profession, that it is not wonderful that men of the best powers now rarely practise medicine. There is a convenient but pretty general idea, that the good *hakim* or *baid* should be satisfied with a pittance from the State, and for the rest be content with the consciousness that his art is a charitable one which will be rewarded in another world if he is not sufficiently paid by the thanks and blessings which attend him here.

It has thus come about that much learning is not looked for in the *baid* or *hakim*, though the former is burdened with the necessity of reading all his books in Sanskrit, and as regards the latter, one may well believe the truth of the story that all the qualifications that were required in the son of a late *hakim* who lived in a great city, were that he should carry his father's staff and promise to read his books.

So much for the decay of the indigenous systems, and yet decayed as they are, and notwithstanding that educated Indians are fully aware of the immense help which is derived from such modern scientific instruments as the microscope, the stethoscope and the clinical thermometer, they still undoubtedly have much influence in the country.

To what is this due? I think to the prevailing idea that the European constitution is so radically different from the Indian that what cures diseases in the former is in the latter either deleterious or ineffective; to a belief in the systems of philosophy which accord with the Indian systems of medicine, so that the patient understands the lines of argument and practice of his fellow countrymen and co-religionists, whereas the views of the European are a mystery to him; to the fact that the *baid* and *hakim* use drugs and recommend articles of diet which are well

* The original story may be found in the *Shaj-nama* of an anecdote connected with Shuja Raja of Dhar. Translated by Pandit Vidyasagara.

known to the patient, and, therefore, in his opinion, devoid of anything which will not defile him; to the consideration which is naturally shewn for all his many prejudices and beliefs; to the feeling that after all he can have something to say in his own treatment and adopt that which commends itself to his judgment as being most likely to succeed; to the patience with which his lengthy story of his ills is heard; and lastly, I believe, to the fact that the patient generally has to do some great thing in the way of abstinence from luxuries or pleasures, and to take nauseous drugs which give him the sense of getting something for his money. With regard to religious belief and prejudice, I consulted a friend, Rao Bahadur THAKUR GOVIND SINGH, the premier noble of Jeypur, whose views are interesting and instructive. He states that the Dharma Shastras lay down that men are subject to different diseases on account of different sins committed in previous births. If the sin is trivial the disease (*karma-roga*) can be removed by the exercise of charity. They are also afflicted by changes in the three humours which are due to irregularities of diet or exposure to heat or cold. Such diseases (*dosh*) may be cured by the help of medicines. A third class of disorder arises from both causes combined, and may be removed by the practice of charity and use of drugs.

When a *baid* is called to see a patient, his first duty is to find out the cause of his disorder, and if he ascertains that it arises from any of the irregularities which have been described, he commences his treatment. Should he fail, he at once advises the use of charity, as it is evident that the disease arises from past acts of sin; should a favourable result not follow, it at once becomes clear that the man's past sins have been too great to admit of present relief. These ideas are naturally much in the *baid's* favor, as it is difficult for him to become discredited, while the priests and poor are on his side. BABU KALI PADA BANERJI, the Principal of the Sanscrit College at Jeypur, has also kindly given me an account of the education and position of Hindu physicians which I attach as a note to this paper. He observes that medicine is nowhere taught in India in the vernacular, hence much time is spent in the study of Sanscrit with which language few *baid*s in the present day become really familiar. Only books are used, there is no general practical education: pupils pick up what knowledge they can of the symptoms and signs of disease by seeing patients with their masters, from whom they also become familiar with the use of drugs. The teachers say that a knowledge of anatomy is not required in medical cases, as it is only necessary for treatment to be acquainted with the symptoms of the different diseases as laid down in books.

The Principal of the College, Mr. VACHA, also adds that the study of medicine is entirely hereditary, and the tuition confined to instruction of a son or pupil by his father or master who never teaches all that he himself knows, but always reserves one or more great secrets for his own advantage.

The foregoing remarks give us some indications of what is needful to popularize our own system.

In the first place I think we should try to lessen the prevailing ignorance of anatomy and physiology by giving

popular lectures or demonstrations which should be illustrated by the magic lantern or pictures, by exhibiting anatomical models in our museums, by encouraging the publication in the vernaculars of very simple works on the subjects I have indicated and on hygiene. These works should generally be pamphlets with rough drawings or colored pictures which the people understand better than elaborate English prints. We should take every opportunity not only in such lectures and books as I have described, but in our practice and conversation of explaining why a certain course of treatment is followed, and of assuring the people that our drugs do not contain anything which is prejudicial to the religion or caste of all classes of Indians. It is easy to shew that the best Hindus and Mussalmans find nothing in the European systems which is repugnant to their respective creeds, and that success in the practice of them does not depend upon the use of wet or dry medicines, or the solution of drugs in alcohol, or in forcing a man to adopt unaccustomed kinds of diet. At the present moment most Jains reject medicines unless they are given as dry powders, and many Hindus and Mahomedans fear that alcohol may be administered to them in some form or other. We should therefore, be careful to have no secret remedies. It would astonish many Indians if it were demonstrated to them that many of the crude compositions of their pharmacopœias are given in a far purer and therefore more exact and reliable form by Europeans. In short, it may be truly said that our system has everything to gain by publicity and discussion, whereas the indigenous ones assuredly lose when light is thrown upon them and the atmosphere of mystery which surrounds them is dispersed. As regards most of the other reasons for success of the indigenous systems which I have advanced, it is clear that we can learn much from them.

We must respect prejudices when they are not harmful, we must be prepared to give reasons for our practice, and exercise more patience and spend more time on individual cases; we must study the diet of the Indian in health as well as in sickness, and we must be careful not to prescribe the so-called patent medicines or to make too much use of routine formulae, but shew that we understand the action and combination of drugs as all Indians have great faith in medicines, and cannot understand the physician who makes light of them. Success in practice depends upon keenness of observation, upon letting nothing, however trivial, escape notice, and we may learn much, I think, in this respect from the old-fashioned conscientious *baid*, who is usually acquainted with the action of a great number of simple vegetable drugs, and is very minute in his investigations, although generally mistaken as to his interpretation of certain phenomena, such for example as the pulse. The "Amrit Sagar" says the good physician should be able to finger the pulse as a skilled performer plays upon the vina or harp.

Lastly, in my opinion, great efforts should be made to put down quackery of all kinds, especially of European origin. No quack or patent medicine should be allowed to be sold or advertised unless its composition is made known and printed on the label of every box or bottle in which it is sold. It should be easy to apply this law to European products, and then it would not be difficult to deal with the so-called Vaidic and Indian articles. Both should be

heavily taxed. A medical act should be passed by which only qualified persons should be allowed to practise European medicine, so that the art may, at all events, be presented in its true colors, and here again, I believe, there would be a strong feeling among Indians that no one should be allowed to practise as a *baid* or *hakim*, who had not passed a fair test, which in time would be gradually made more difficult.

The whole question resolves itself into a patient struggle between ignorance, prejudice, custom and superstition on the one hand, and knowledge, enlightenment, and science on the other. *Magna est veritas et prevalebit.*

The outlook is not discouraging as the increasing attendance at our hospitals and dispensaries everywhere shews, more advance in public estimation has of course been made in surgery because results are so evident, but medicine has had its triumphs, and more especially the preventive branch of it. I will conclude with only one warning, and that is, that we should be content to proceed slowly if we wish for ultimate success, bearing in mind that the habits and beliefs of ages cannot be changed in a day—no, not even in a century.

APPENDIX.

Sanskrit College, Jeypur, October 28th 1894.

DEAR SIR,—In reply to your kind note of the 18th instant, I beg to inform you that most of the notable ancient Sanscrit medical works form the curriculum of studies in the Sanskrit College here. At the Upadhyaya (Proficiency) examination in Ayurveda (Medical Science) the following are the text books:—

Nidan, the great work on the diagnosis of diseases by MADHAV ACHARYA.

Narivijnan, a tract on feeling the pulse, by RAM CHARAN DAS.

Bhavaprakas, a later compilation of medical work by BHAVA MISRA.

Paribhashapradip, a book on the Hindu materia medica by GOVINDA SEN.

Chikitsa Sara Sangraha, an ancient compilation from Charak and Susruta, by CHAKRADUTTA.

Rasmanjari, an elementary treatise on chemistry, by BHALINATH.

At the Sastri (Honours) examination the text books are:—

Bhavaprakas, as at the Upadhyaya examination.

Astangahrdaya, a work on the diseases of the heart and the whole body by BAGBHATTA.

Susruta Sanhita: chapter on the body.

Charak Sanhita: Chapters on treatment.

Rasendra Sara Sangraha, a work on chemistry, by GOPALKRISHNA.

At the Acharya (Final) examination, the text-books are:—

Susruta Sanhita.

Charak Sanhita.

Astangahrdaya of Bagbhatta.

Bhaisajya Ratnavali, a modern Hindu pharmacopoeia.

Rasendra Chintamani, the best work on the chemical or mineral drugs by RAM CHANDRA.

I may add here that these are the Sanscrit medical works generally studied also at Calcutta, Benares, and other parts of India. There are besides these many other famous Sanscrit works on medicine, namely Sarangdhar Sanhita, Atreya Sanhita, Harit Sanhita, Vira Sindhavaloka, etc., too numerous to mention. But they are not much in use at present.

2. The titles conferred here in the medical examinations are *Bishak* at the Upadhyaya, *Bhishagawar* at the Sastri and *Bhishagacharya* at the final examination. But the titles conferred in Bengal are *Kaviraj*, *Kavirajan*, *Kanthabharan*, and *Dhanvrintah*; and in the N.W. Provinces *Vaidya*, *Vaidyarsaja*, and *Vaidyachuramani*. I must mention in this connection that nowhere besides Jeypur is Hindu medicine systematically taught in the College and that everywhere else the science is taught privately by *chittan* or *naiv* *baid*.

3. To complete the whole course of medical study, at the Sanskrit College of Jeypur it takes a boy no less than a period of ten years, after which he is expected to pass the highest examination in medicine and can be said to possess a competent knowledge of the Ayurveda.

4. Charak and Susruta are, as far as I am aware, being translated into English by Kaviraj AVANISH CHANDRA VIDYARATNA of Calcutta. No other Sanscrit work has yet been known to me to be rendered into English.

5. Medicine is nowhere taught in India in the vernacular; medical education being everywhere given entirely in Sanscrit. The medical works in Hindi such as *Anrit Sagara* by Maharaja PRATAPA SINHA, of Jeypur, &c., as well as those in Bengali are never made use of by the *baid*s of even the commonest efficiency.

6. Hindu medical education is given by the *baid*s in India entirely from books, dissection of dead bodies being everywhere considered unholly. It is needless to state that the modern progress in the science of anatomy made in Europe is, therefore, almost wholly unknown to them. The Native *baid*s, however, consider themselves well up in diagnosis and treatment of diseases even without any knowledge of it; for they say symptoms of diseases are quite sufficient, except only in a complicated surgical operation, to enable the physician to deal with cases successfully. All possible care is taken by them to make the pupils conversant with the symptoms and diseases by seeing patients in company with themselves as well as to render them familiar with the herbs and drugs used.

I believe I have now put down all the information you want. Any further information on the subject you may be in need of, I will be very glad to furnish you whenever required. Yours very truly, KALPADA BANERJEE.

STRYCHNINE SUBCUTANEOUSLY IN PERIPHERAL NEURITIS.

A STODART-WALKER, Esq., M.B., C.M., advocates in favor of the hypodermic employment of strychnine in those cases of peripheral neuritis where the paralysis, swelling, anæsthesia, pain or exaggerated knee-jerks are advanced or well marked, and in which most every other medicine has failed. He cites three typical cases where variations existed with regard to the responses to electricity and to the condition of the knee-jerk, but in all of which the strychnine produced marvellously quick results and complete recovery. His method was to give three injections daily, beginning with doses of 1/10th grain and gradually increasing the strength of each injection to 1/5th grain. A little pain and some small swellings of the glands in the vicinity of the puncture follow the first few injections, but these rapidly subside, and marked improvement begins forthwith.

SOME NOTES ON SURGICAL ECONOMY IN HOSPITALS.*

By ARTHUR NEVE, F.R.C.S.

Kashmir.

It will be freely acknowledged that in hospitals economy is secondary to efficiency; and, indeed, that efficiency is essential to true economy. But efficiency may be and often is combined with waste and extravagance.

If surgeons of British hospitals had to raise and administer the funds as well as care for the patients in their surgical wards, I venture to think they would study both sides of the question, as the surgeons of the Kashmir Mission Hospital have to do. The cost of dressings has enormously increased with the introduction of antiseptic surgery. Dr. JOSEPH BELL has pointed out that while in 1854 the surgical dressings, etc., in the Edinburgh Royal Infirmary cost £286, in 1891 they cost £2,821, "an altogether astounding increase in expense."

For the sake of comparison I tabulate the statistics of the Kashmir Mission Hospital alongside those of the Edinburgh Royal Infirmary for 1891-92:—

| | E. | R. | I. | K. | M. | H. |
|-----------------------------------|-----------|---------|---------|----|----|----|
| Total operations ... | ... | 2,171 | 2,198 | | | |
| In-patients ... | ... | 4,380 | 619 | | | |
| Average residence. ... | ... | 25 days | 18 days | | | |
| Cost per patient ... | ... | £4 7 8½ | £0 7 8 | | | |
| Surgical dressings, bandages, &c. | £2821 0 0 | about | £17 0 0 | | | |
| Mortality ... | ... | 119 | 8 | | | |

It will be at once noticed that a very large number of our operation cases are treated as out-patients. The explanation that such were minor operations would not be altogether correct. The hospital suburb is always full of out patients, many of whom have religious or social prejudices against becoming in-patients. Four or five cases on whom major operations have been performed are daily brought as out-patients. Apart from the eye operations which bulk so largely (881 cases), about 650 might be reckoned as major operations.

The difference between the cost of the average Scotch and Kashmir patient is, of course, mainly due to the cheapness of food and the low rate of wages in this country, where rice can be bought for 3d per lb. So that £2 10s. a year would feed one adult Kashmiri. For the same reason wages are low, and the total cost of our seventeen dressers and servants is only £100.

On the other hand, the bedsteads, blankets, sheets, and surgical dressings have to be procured from England with the extra expense of 5,000 miles of sea and 1,500 miles of land carriage.

Obviously if we used the same surgical dressing materials in the same proportion as in Scotland, the cost of dressings for the Kashmiri patient would be greater than for the Scotch patient, amounting certainly to not less than £500 instead of the humble 217.

The expense of our surgical dressings may be thus analysed:—

Bandage cloth, 800 yards, costing £6 13s. This represents about 2,500 bandages, most of which are washed twice, and so represent about 7,500 bandages. As we apply

not less than 10,000 dressings a year, it appears that the same bandages are sometimes re-applied. The cost of washing them is about £2 a year. If new bandages were each time used, the total cost would be at least three times as great. Bandages from special cases, such as gangrene, erysipelas, or leprosy are all burnt.

Muslin for the sawdust pads, of which I give further details below, costs, with the making up, about £4. This makes about 2,000 pads, which are rewashed like the bandages.

Cedar sawdust costs about 6d. per cwt. If it has to be bought, but we preserve the sawdust of our own timber used in building. Probably 6 or 8 cwt. of sawdust, serves us for the year.

Cotton wool costs about 5d. a lb., and of the local product we use about 100 lbs. for various purposes.

The chief remaining items of expense would be Salalbroth wool, about 20 lbs., and a few packets of cyanide gauze, also a few pounds of surgical lint, with usual etceteras, protective, mackintosh, etc.

The chief requisites in a surgical dressing are that it should be aseptic, antiseptic, absorbent, comfortable, cheap, and easily applied. Of late years Salalbroth cotton wool and wood wool have become the popular and staple hospital dressings. And it may be readily acknowledged that they fulfil satisfactorily most of the chief indications except that of cheapness. Sir J. LISTER has pointed out the drawbacks to corrosive sublimate deep dressings, the readiness with which serous discharge neutralises the antiseptic properties, the over-solubility leading to the mercury being washed out, or to irritation of the skin. For these reasons the cyanide of mercury gauze, which is soft and very absorbent as well as antiseptically stable, will grow in popularity. But all these materials are expensive. Where, as in the receptions of discharges from suppurating joints, or diseased bone, or psoas abscesses, antiseptic and absorbent dressings are needed in bulk, the cost of each dressing is considerable.

If we were to replace all our antiseptic sawdust pads by Salalbroth wool the cost would be about £75 per annum instead of £4 10s. The pads are a most efficient and easily applied dressing. Muslin, somewhat close in texture to avoid the sawdust dusting through, is made into bags from 4 or 6 to 12 inches square; these bags are soaked in corrosive sublimate lotion and dried. Cedar wood sawdust (or pine sawdust) is also moistened with the lotion and dried. With this the bags are loosely filled, so as when laid flat to be from ½ inch to 1½ inches thick, according to the size of the bag. In applying them we frequently moisten the deeper layer with carbolic lotion.

The pads are admirably suited for use with the zinc cyanide of mercury. A given quantity of the mercury is stirred into some 1:20 carbolic in a tray, a few drops of aniline dye are added, and the bags are then placed flat in the tray. The sawdust in the bags should not have been medicated previously. The prepared bags may be placed to dry in a special box, or used fresh in their moist condition. It is not necessary to soak the whole bag. The dye shows which is the prepared surface. Of course, these pads can be used, and are indeed usually used with other materials. For example, if a tumour has been excised and the wound sutured, we then apply two or three

* Read before the Medical-Chirurgical Society of Edinburgh by Dr. Oathart, and sent to the Record for publication by the author.

Bags of cyanide lint (prepared as suggested by LISTER) and cover the wound with a prepared cyanide pad. If there were oozings, the pad would absorb 8 or 10 ounces of discharge, and the evenly adjusted pressure of the bag is useful, acting almost like a splint. In dressing an amputation wound the pads would be used below, where most of the discharge will gravitate, while above absorbent wool would be used.

For special cases, such as pueral abscesses with abundant discharge, extra large bags are easily provided. And for some cases similar bags, 2 feet square, are laid in the bed to protect the sheets. The pads have less drying properties than absorbent wool, which sometimes dries in such a way as to form a crust under which the discharge is pent up. This never occurs in the pads. The discharge is so uniformly absorbed that usually not a drop of matter will escape to the surface or until the entire sawdust is soaked. Here again they are superior to absorbent wool which frequently allows even a small amount of discharge to penetrate directly to the surface instead of diffusing itself.

Both the muslin of the bags and the bandages are boiled, washed, and used again. After coming from the wash they are soaked for forty-eight hours in corrosive sublimate lotion. So that there is no risk of sepsis.

These bags are used by us in padding many kinds of splints, especially for Macintyre splints. When once the preparation and use of the bags has become a matter of routine, one finds them more convenient than any other dressing for most operation cases. During the last few weeks, with several hundred operation cases from ovariotomy, hernia, lithotomy and amputations, to scrapings of ulcers or incisions of abscesses, I do not recall a single case (except eye operations and a few minors) in which bags were not used.

The two following cases may serve as examples of the application of zinc-cyanide sawdust pads:—

A. G., acute suppurative periostitis of femur; operation August 5th, 1893, drained and irrigated. Two-thirds of femur bare, and disease is of thirty days' duration, so necrosis seems probable. Applied two pads and covered with Macintosh. Wound dressed August 6th, 9th, 11th, 14th, 17th, dismissed cured August 21st. In this case there was abundant discharge, at first soaking both bags, but it rapidly ceased. Altogether fourteen bags were used at a total cost of less than 6d. With wool wool dressings this case would have cost at least 6s.

M. D., carcinoma of foot, amputation, upper third of leg. Dressed August 11th, 14th, 17th, 20th. Altogether six bags were used, a few strips, perhaps half a yard, of locally prepared zinc cyanide lint, and 1 lb. of locally prepared absorbent cotton wool. So that the total cost, including six bandages, six pads of lint, and absorbent cotton wool, did not exceed 1s.

I have at different times made experiments with the pads prepared in various ways, and then soaked with blood or serum and kept in a warm moist place. They have been kept for periods up to ten days, remoistening after a few days, and inoculating with septic pus, but without septic action, and even blood clots mixed with the sawdust became decomposed completely. These experiments require

bacteriological confirmation by cultivation tests, but they agree with the results of clinical observation.

Cotton wool in the ordinary commercial form here costs 8d. a lb. But before being suitable for use, except merely as a padding, it requires to be rendered absorbent. I should like to know a simple way of accomplishing this. After trying numerous plans I now merely have it boiled with various alkaline ingredients and soap by the washerman, after which it is carded. It will not sink in water if a pledget is dropped on the surface, but it is suitable for artificial sponges, and if bandaged on a discharging wound absorbs the discharge fairly well.

The dressing of all in-patients is invariably directed by Dr. E. F. NEVE or myself, and the assistants are taught to re-use any unsoiled portions of the old dressings in the outer dressings. Perhaps this may seem over-economy, but in careful hands with a knowledge of antiseptic surgery it is safe. It would be foreign to my present purpose to go into the subject of simple and readily adjusted forms of splints, although such are a real economy, and it is important that young practitioners should be familiarised with the use of easily obtainable and cheap appliances.

We find wooden laths and hoop iron useful, as they can be readily cut and bent to required shapes. But we also use to a large extent bracketed splints of local manufacture. A Kashmiri-made Macintyre splint costing five shillings is almost indistinguishable from the English article.

THE NECESSITY FOR AN ACT RESTRICTING THE FREE SALE OF POISONS IN BENGAL.

By SURGEON-CAPT. J. F. EVANS, M.B.,
and

ASSISTANT SURGEON CHUNI LAL BOSE, M.B., F.C.S.

Chemical Examiners to the Government of Bengal.

Introductory Remarks.—A very large number of cases of poisoning occur annually in Bengal, and as none of the safeguards against their occurrence in vogue in England and other European countries exist in Bengal, it naturally suggests itself whether, considering the difference of population, the number of cases of poisoning is excessive, and secondly, whether the number of cases of poisoning is capable of reduction.

Throughout the length and breadth of India, except in Bombay, the sale of poisons is absolutely free and unrestricted. Arsenic, aconite root, nux vomica seeds and other deadly poisons may be bought by man or woman in almost any quantity and without question. Many potent poisons such as datura, oleander, grow wild or almost so in many parts of India, so that any measure prohibiting the possession of such poisons would be very difficult to enforce.

The drugs however most frequently used as poisons do not grow wild, but can be easily purchased in any bazar in India.

In the population of every country there are some with criminal instincts ready to turn to account any opportunity that exists for the committal of crime. It is individuals of this class, who by association and habit of life

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

would come to learn the nature and appreciate the use of a poison. So long then as criminals exist, the free traffic in poisonous drugs is attended with very considerable danger to the population in general.

This being so, the necessity of placing the sale of poisons under legal restrictions has often been represented to Government by those well qualified to speak with authority on the subject. Government has however hitherto declined to take action in the matter, and on several occasions has assigned definite reasons for declining to take action.

Admittedly on all hands, the restriction of the sale of poisons in India is by no means so simple and easy as in England. Certain difficulties are self-evident, and these have apparently strongly influenced Government in its decision. Our object in bringing the matter before the Medical Congress is to invite discussion in the hope that some feasible plan of dealing with an admitted evil may be evolved.

The reason for particularising Bengal as the subject of our paper is, *firstly* that there is already in existence a Poisons Act in Bombay; and *secondly*, that complete statistics with regard to other provinces are not available. However, the few statistics that we have been able to collect with regard to the prevalence of the crime of poisoning in other provinces unmistakably shew that what is true for Bengal is also true for her sister provinces.

In our opinion, it is not only possible to restrict the free sale of poisons, but we believe also that such restrictions will also be followed by a permanent diminution of crime. We are supported in this belief by the opinions of many persons who have devoted considerable attention to the matter.

Scope of the paper.—From natural and other causes peculiar to India, the subject has many bearings. These can best be considered under the different sections into which our paper is divided.

We have arranged the matter treated in our paper under the following heads:—

- (a) Prevalence of poisoning in Bengal as compared with England and the necessity for accurate statistics regarding cases of poisoning in Bengal.
- (b) Nature of the poisoning which occurs in the province of Bengal.
- (c) Measures proposed with the object of restricting the free sale of poisons.

(a) PREVALENCE OF POISONING IN BENGAL.

Available Statistics.—The prevalence of poisoning can only be judged from the number of cases of fatal and non-fatal poisoning annually reported. At the present time in the province of Bengal, no report is available regarding the total annual number either of fatal or non-fatal cases of poisoning.

The Police Administration Reports deal naturally with criminal poisoning only, and contain no reference to instances of accidental poisoning.

The Chemical Examiner's Report is simply the record of the results of the chemical examination of viscera, vomited matters, and other articles that may be referred for examination. It does not profess to be a return even of the total suspected cases of poisoning, and affords no information as to the nature of the cases whether fatal or non-fatal, and if fatal, whether suicidal, accidental or homicidal.

The Report of the Health Officer of Calcutta and the Calcutta Police Administration Return deal with fatal cases of poisoning more in detail, but have reference only to Calcutta and its suburbs.

FATAL POISONING.

English statistics divide fatal cases of poisoning into *murder by poison, suicide and accidental death from poison.* The latest English statistics which we have been able to obtain refer to the five years 1876 to 1880. During this period there occurred 12 cases of murder by poison, 642 cases of suicide by poison and 927 cases of death from accidental poisoning. Let us first deal with the crime of murder by poison.

Murder by Poison.—As just stated, 12 cases occurred in England during the five years 1876 to 1880, or an average of '07 per million of the population in each year.

During the same period of time in Bengal the Police Administration Report shows that 94 cases of murder by poison occurred, or an average of '31 per million in each year.

Accordingly, for the period under reference, the crime of murder by poison was rather more than four times more prevalent in Bengal than in England.

The Police Administration Reports for the last five years, *viz.*, 1889 to 1893, shew a slight reduction in the number of cases of murder by poison, 81 cases having occurred, or an average of '23 per million of the population.

The crime is therefore still three times more prevalent in Bengal than in England.

Scientific evidence of death by poison.—It is admissible, we think, to refer here to the nature of the scientific evidence on which the charge of poisoning rests. First in importance is the evidence of the doctor who has treated the sick man, and that of the medical man who has made the *post-mortem* examination. Next comes the result of the chemical examination of viscera, vomited matters, stomach washings, etc. Chemical examination is often negative for many reasons; the poison may have been absorbed and destroyed in the organs of the body; it may have been voided by vomiting and the vomited matter lost, or it may have been removed by prompt remedial measures. It is partly on this account that in an enquiry as to the prevalence of poisoning that the Chemical Examiner's reports affords so little assistance. There is also another reason why the Chemical Examiner's reports are incomplete. In many instances where the medical officer holding the *post-mortem* examination finds a sufficient quantity of recognisable poison in the stomach to enable him to give a positive opinion as to the cause of death, the cases are never referred to the Chemical Examiner at all. We do not suppose this is ever done in cases of suspected murder by poison, at least it ought not to be; but it does take place in cases of suicide, the prevalence of which class of poisoning we now pass to consider.

Suicide by Poison.—As already stated, the English statistics for the five years 1876 to 1880 shew that 642 cases of suicide by poisoning occurred, or 8'55 per million of the population in each year.

In Bengal, the report of the Sanitary Commissioner shews that the total number of suicides from all causes occurring in the province during this period was 11,562 or 98'8 per million of population per annum.

For the last five years the numbers are 15,743 or 45.8 per million per annum.

The number of suicides from all causes occurring in England and Wales in the year 1875 gives an average of 65.2 per million of the population. So far then as can be ascertained, suicide is less frequent in India than in England.

We are however more concerned with the methods of suicide as practised in the two countries. In England, suicide by poison constitutes about 12.25 per cent. of the total cases of suicide, giving, as stated above, an incidence of suicide by poisoning equivalent to 8.55 per million of the population per annum. We regret to say that no returns are available for the whole province of Bengal to shew what proportion of the suicides is due to violence and what to poison; nor are all the cases of suspected suicide by poisoning that occur referred to the Chemical Examiner. Thus Surgeon-Major J. B. GIBBONS, Police Surgeon of Calcutta, informs us that out of 44 cases of suicide by opium examined by him in the year 1st June 1893 to 1st June 1894, he sent only 18 cases to the Chemical Examiner. In the remaining 26 cases, there was a sufficient quantity of opium in the stomach to enable him to ascribe the deaths to the action of the poison without the help of chemical analysis.

Suicide by poison in Calcutta.—We are not, however, without some data as to the incidence of suicide by poisoning in Bengal. For the reports of the Commissioner of Police of Calcutta afford much more accurate information regarding the occurrence of suicide by poison in the town and suburbs of Calcutta than is available for the rest of the province. Thus during the five years 1876 to 1880, 126 cases occurred or an average of 36.42 per million per annum.

For the five years 1889 to 1893, 236 cases occurred or an annual average of 68.84 per million. Of these cases 23 were due to arsenic, 167 to opium and 46 to other poisons.

Of the total cases of suicide in the town and suburbs of Calcutta, 55.8 per cent. were due to poison as against 12.25 per cent. in England. These figures also shew that suicide by means of poison is about 19 times more prevalent among the population of the town of Calcutta than it is generally among the population of England.

Is there any reason to suppose that suicide by poison is more prevalent in the large towns of Bengal like Calcutta than in rural districts, or may the state of affairs in Calcutta be taken as representing the conditions existing generally throughout the province?

There is nothing in the available statistics to warrant the latter conclusion, and there is, on the other hand, the well-recognised fact that the conditions of life in large and wealthy cities are prone to develop those mental, social and physical states which frequently prompt self-destruction. Painless methods of self-destruction are preferable to painful methods, and it is in large towns that a knowledge of the painless methods of ending life would most easily be acquired and the drugs selected for the purpose be most easily procured.

It is possible, however, that a considerable number of cases of suicide by poison occur in rural districts that are never reported to the police or brought to light in any way. Instances of suicide also occurring in the families of respectable and influential individuals are no doubt often secretly disposed of to avoid scandal.

At the present time then the available statistics afford no information as to what proportion of the total suicides occurring in the province are due to violent methods and what proportion to the use of poison.

Increased incidence of suicide by poison in Calcutta.—Some facts are however available, which go to shew that not only has suicide increased to an alarming extent in the large towns, but that the use of poison has a great deal to do with the increase that has taken place.

Hanging and drowning were the methods of self-destruction chiefly selected a quarter of a century ago. To-day in the town of Calcutta more than half the cases of suicide are due to poison, a great contrast to the conditions existing half a century ago. For in the year 1856, of 21 cases of suicide occurring in Calcutta 4 or about 20 per cent. were caused by poison, the remainder by hanging and drowning.

During the year 1856, according to Dr. WOODFORD, then Police Surgeon of Calcutta, the proportion of suicide was 1 to 2,000 of the population of the town. The proportion of suicides to the population in the town of Calcutta, exclusive of suburbs, is now 1 to 1,300, this being the average annual incidence during the last six years.

These figures shew a truly alarming increase in the crime of self-destruction in the municipal area of Calcutta and become even more significant from the fact that poison now accounts for 70 per cent. of the suicides as against 20 per cent. in 1850.

In 1865, Dr. BRATTON reported the occurrence of 41 cases of suicide at Dacca. Of these, one only was due to poison, 38 to hanging and the remainder to drowning.

It will be noted that the statistics which we are able to quote refer to only one large town in the province. Further that these statistics are advanced as evidence of the necessity for new legislative measures.

It may legitimately be pointed out that legislation, the necessity for which is based on the condition in one large town of a province with a population of 70,000,000 may not be required in the rest of the province.

To this we would reply that the existing conditions regarding the sale of poisons although possibly not productive of a large crop of suicides by poison in the rural districts, undoubtedly produce in the rural districts a great deal of other crime to which we shall subsequently refer. Further, it will be seen that the measures proposed chiefly affect the large towns.

The conditions of life in all the large towns of the province, if not exactly similar, at any rate approximate to those attending life in Calcutta.

Necessity for a medical certificate of cause of death before cremation or burial is permitted.—At the present time outside Calcutta but little is accurately known about the conditions existing in the rest of the province as regards the crime of self-destruction, nor is it probable that reliable information will be forthcoming so long as the dead may be disposed of by cremation or burial without a medical certificate as to the cause of death.

Naturally it would be preposterous in rural districts to require a medical certificate as to the cause of death before a dead body could be disposed of. It is far otherwise, however, in large towns, where medical advice is plentiful and the dead are disposed of in regular authorised places under police control.

The enactment of such a measure should form the initial step. Its operation in large towns would be distinctly beneficial, enabling the authorities to estimate the amount of crime and gauge the benefits or otherwise derived from legislative measures for its repression. The value and accuracy of returns relating to the prevalence and fatal nature of disease would also be largely enhanced by such a measure. It is in large towns also that deaths by poisoning of a non-criminal nature chiefly occur. For the welfare of the community, it is highly important that Government should be able to ascertain the number of such deaths. But so long as the dead can be disposed of without medical certificates, the accurate registration of the cause of death is quite impossible.

Death from accidental poisoning.—Death by poisoning of a non-criminal kind is usually described as death from accidental poisoning. Of such deaths 927 or 5.15 per million per annum occurred in England during the five years 1876 to 1880. It is highly improbable that anything like this number occurs annually in Bengal. The population is for the most part agricultural, and unlikely to handle poisons with the appearance of which they are unacquainted. In the large towns however, notably in Calcutta, a certain number of deaths from accidental poisoning occur annually. Thus in the municipal area of Calcutta during the five years 1876 to 1880, 14 deaths from accidental poisoning occurred or an average of 6.5 per million of the population per annum; and during the five years 1889 to 1893, 11 accidental deaths from poisoning are recorded in the same area or 3.6 per million per annum.

Certain types of cases of accidental poisoning are apparently almost unavoidable. Those cases however which arise from careless dispensing, or from the vending of drugs by ignorant, irresponsible persons, cannot be too strongly condemned.

The Bengal Municipal Act, Section 252, and the Calcutta Municipal Consolidation Act, Section 368, were framed with a view to prevent such accidents. They enact that the drugs contained in the British Pharmacopœia, if dispensed on prescription or when used by any other than a practitioner of indigenous medicine, must be prepared by a properly qualified compounder, and sold only in registered shops. That a considerable number of these same drugs, when used by a practitioner of indigenous medicine, if not dispensed on prescription, need not be prepared by a properly qualified compounder, and may be sold in a non-registered shop, and further that no restriction or safeguard of any kind shall be placed on the sale of indigenous remedies, whether contained in the British Pharmacopœia or not, provided they are not sold in a shop where British Pharmacopœia drugs are dispensed. This matter will be referred to again when dealing with the proposed restrictive measures.

NON-FATAL CASES OF POISONING.

The difficulty of obtaining any adequate conception of the prevalence of fatal poisoning in the province of Bengal has no doubt been already realised. It is in fact only possible to speak, with a certain show of authority regarding one town in the whole province, except as regards murder by poison.

Administration of drugs for purposes of theft.—In non-fatal cases of human poisoning, it is only the criminal cases that are recorded. These for the most part consist in the administration of stupefying drugs, generally datura, for purposes of theft. It is a class of crime fortunately very rare in European countries. The Bengal Police returns record 161 such cases during the five years 1889 to 1893, or an average of 46 per million of the population.

As regards other cases of non-fatal poisoning whether suicidal or accidental, absolutely no general information whatever is to be obtained. It is possible and even probable that their number is very considerable. Thus at the Medical College Hospital, 103 non-fatal cases of poisoning were treated during the year 1893, but in six only of these cases were the vomited matters or substances suspected to be or to contain poison sent to the Chemical Examiner for analysis. At the Mayo Hospital, 24 non-fatal cases of poisoning were treated during the year 1893, but in no instance was the matter referred to the Chemical Examiner by the police.*

The Bengal Administration Report shows that at the hospitals throughout the province, about 345 cases of poisoning are treated annually of which 345 recover, taking the average of the four years 1889 to 1892. The hospital records thus shew a yearly average of 345 cases of non-fatal poisoning.

Necessity for accurate statistics of poisoning cases.—Such is then the account that we are able to supply of the prevalence of human poisoning in Bengal, both fatal and non-fatal. It is manifest that the statistics are lamentably incomplete. More accurate returns are essential. It is hardly possible to suppose that legislation dealing with the free sale of some of the poisons at present in use, can much longer be postponed. The measure of the usefulness of such legislation can only be gauged by reference to the statistics of poisoning both before its introduction and after. It would be opportune therefore to now prepare the ground for the introduction of such a measure, by establishing some more accurate system for the record of cases of poisoning.

We would recommend that every case of poisoning, whether fatal or non-fatal, should be reported to the police, and further that in every case such articles bearing on the case as may be available for examination be referred to the Chemical Examiner for analysis. This is, of course, done to a limited extent in Calcutta, but it is questionable, we think, whether in other large towns of the province the proposed measures are adequately carried out. At least there are no records to shew the results of the action taken.

Suggestions for improving the statistics relating to poisoning cases.—The annual reports of the Commissioner of Police, Calcutta, and Health Officer, Calcutta, already supply more information regarding the nature and frequency of poisoning for the area dealt with by them than any other similar return.

We would suggest, however, that their usefulness would still further be increased by a slight addition to the tabular statements which include cases of poisoning. An extra column might be added to the tabular statement to convey

* We are indebted to Dr. Kolarajah Das, Registrar, Medical College Hospital, and to Dr. Manmathanath Chatterjee, Resident Physician, Mayo Native Hospital, for the following two tables upon which the above statement regarding the non-fatal cases of poisoning has been based.

information as to the evidence upon which the deaths were returned as due to poisoning, whether upon medical evidence only, chemical analysis only or both. Such information is, no doubt, already available, and would certainly increase the value of these tabular statements.

The record of accidental deaths in the police returns, both for Calcutta and the province, contains no return of the number due to poisoning. At present non-fatal cases of poisoning are not dealt with in either of the two reports, but were these cases all reported both to the Police and the Chemical Examiner, the results of investigation could be embodied in an additional table.

We are well aware that the information contained in a small tabular statement comprising a few lines often requires a considerable quantity of machinery for its accurate collection.

TABLE I.

Number of Poisoning cases treated in the Medical College Hospital during 1893.

| POISONS. | Total admis- sion. | Male. | Female. | Child. | Recovery. |
|---------------------|-----------------------|-------|---------|--------|-----------|
| Opium ... | 66 | 45 | 18 | 3 | 45 |
| Morphia ... | 3 | 1 | 1 | 1 | 3 |
| Arsenic ... | 17 | 8 | 3 | 6 | 15 |
| Belladonna ... | 5 | 3 | 2 | ... | 5 |
| Atropia ... | 2 | 1 | ... | 1 | 2 |
| Datura ... | 6 | 4 | 2 | ... | 6 |
| Cannabis Indica ... | 3 | 3 | ... | ... | 3 |
| Bhang ... | 1 | 1 | ... | ... | 1 |
| Carbolic Acid ... | 2 | 2 | ... | ... | 2 |
| Turpentine... .. | 1 | ... | ... | ... | 1 |
| Kerosine Oil ... | 7 | ... | ... | 7 | 7 |
| Strychnine ... | 1 | 1 | ... | ... | 1 |
| Castor Oil seed ... | 1 | ... | ... | 1 | 1 |
| Camphor ... | 1 | ... | 1 | ... | 1 |
| Aconite... .. | 1 | ... | 1 | ... | 1 |
| Unclassified ... | 9 | ... | ... | ... | 9 |
| Total ... | 126 | 69 | 28 | 20 | 103 |

TABLE II.

Number of Poisoning cases treated in the Mayo Hospital during 1893.

| POISONS. | Total admis- sion. | Recovery. |
|------------------------|-----------------------|-----------|
| Opium ... | 28 | 15 |
| Kerosine Oil ... | 5 | 3 |
| Sulphuric Acid ... | 1 | |
| Carbolic Acid ... | 1 | 1 |
| Camphor ... | 1 | 1 |
| Bhang ... | 2 | 2 |
| Turpentine... .. | 1 | 1 |
| Aconite ... | 1 | 1 |
| Carbonic Oxide Gas ... | 1 | 1 |
| Total ... | 39 | 25 |

That the larger towns in Bengal should make returns of poisoning cases among their population similar to those furnished by Calcutta, does not seem however to be an excessive demand. They probably are supplied with some of the requisite machinery already.

The Sanitary Commissioner's report for the province records the total suicides for the year, but the number due to poison is not separately furnished. It would be a great advantage if the numbers due to violence and due to poisons could be given separately, and if the nature of the evidence upon which a suicide is declared due to poison could also be added in an abbreviated form suitable for insertion in a tabular statement.

A similar remark applies to the Police Administration Report. No information is contained as to the evidence upon which cases are declared to be *murder by poison, drugging, &c.* If this could be added in a form not too bulky for insertion in Statement, A, Part I, the analysis of cases of poisoning would be greatly assisted.

In the same report a number of cases are returned as attempts at and abatement of suicide, but whether the attempts were made by means of violence or poison is not shown.

Prevalence of Cattle Poisoning.—Hitherto we have dealt with the prevalence of human poisoning, but we referred to the fact that the free access of poison produced a class of crime almost special to the rural districts. The crime is the poisoning of animals. It is rare in Europe but very prevalent in India. For the most part the animals are cattle, and no record of the prevalence of poisoning in Bengal under the conditions now existing would be complete, which neglected this class of crime.

During the ten years ending in 1893, 1,413 head of cattle were suspected to have died from poisoning in Bengal alone. Poison was detected in 75 per cent. of the cases.

Cattle poisoning is specially to be deprecated, as the cattle form in many instances the sole wealth of their owners. It is hoped that the introduction of legislative measures will result eventually in the abolition of this crime.

This then concludes such information as we are able to submit regarding the prevalence of all kinds of poisoning at the present time. The way has been thus prepared for the consideration of the nature of the poisoning cases which occur. Before, however, passing to this part of the subject, it will not be out of place to give a brief summary of the history of poisoning in India.

SUMMARY OF HISTORY OF POISONING IN INDIA.

The shastras here and there record cases of poisoning of kings by their nearest of kin in order to obtain possession of the throne and of husbands by their wives for reasons not very apparent. The Mahabharata records the case of BHISHM SEN, the second of the Pandavas, who was poisoned by his jealous cousin and rival Duryodhan. Although one cannot vouch for the authenticity of such cases, still they tend to shew that poisoning was practised even by the bold Aryan settlers of Northern India.

Sushruta, one of the oldest authorities on Hindu medicine, mentions the practice of poisoning the water sources of an invaded country with a view to destroy the unsuspecting invaders who might use the poisoned water. This practice is still extant; we hear of the poisoning of the water sources by aconite in Burma and Nepal at the time of the invasion of those countries by the British Army. The poisoning of water is also resorted to for the purpose of destroying fish and thereby inflicting loss on the owner

Dr. WATT mentions the use of the following plants for the purpose :—

- (1) *Strychnos Nux Vomica.*
- (2) *Lasiosiphon Speciosus.*
- (3) *Balanites Roxburghii.*
- (4) *Tephrosia Sulterosa.*
- (5) *Euphorbia Tirucalli.*
- (6) *Hydrocarpus Wightiana.*
- (7) *Hydrocarpus Venenata.*

Besides these, *Cocculus Indicus* is also largely used for this purpose.

Sushruta also mentions the use of poisons together with harmless substances as charms and love potions. He describes the various modes of administration of poison prevailing at the time, and although the practicability of some of these is questionable, it will not be uninteresting to enumerate them here. Thus poisons were mixed with food drinks, tooth powder, anointing oils, honey, fragrant substances used for cleansing the body, medicine, bathing water, essences, snuff, articles used for smoking such as tobacco, black paint and other eye salves. It is related also that poisonous substances were sometimes sprinkled over garlands, clothes, beds, armour, shoes, foot stools and seats on horses and elephants.

About two centuries before the Christian era, the whole dynasty of the kings of Magadha are reported to have been poisoned by a designing minister.

Coming to the Mahomedan age, when intrigues were common, both in the court and inside the harem, rivalry in love and political power contributed largely to the increase of cases of poisoning. The victims were either killed or deprived of intellect by the use of poisons less lethal in character.

It does not appear to be true, as stated by some earlier European travellers and quoted by CHEVREUX, that the burning of Hindu widows on the funeral pyre of their husbands originated in the fact that Hindu girls used to poison their husbands on the smallest pretext, and that this rite was enforced to put a stop to the practice.

During the earlier period of the English administration, theft by administering intoxicating drugs became frequent, and the practice prevails to this day, though to a much less extent.

The historical records give but little information as to the poisons in use in ancient times, but show that the poisoner's tradition in India dates back to a very early age.

Sufficient has accordingly been now advanced to demonstrate not only the present prevalence, but also the antiquity of poisoning in India.

The statistics quoted are evidence that poisoning is unduly prevalent at the present time, murder by poison being thrice as prevalent, and suicide by poison apparently many times more prevalent than in England, where the sale of poisons is under legal restrictions.

The conclusion is fairly logical, that those measures which have succeeded in bringing about a reduction of poisoning in other countries, may *ceteris paribus* be equally successful in India.

The fact that the conditions are not the same in the two countries has already been referred to. But it will be seen when the nature of the poisoning in Bengal is reviewed, that the special natural conditions existing in India do not at the present time exercise much influence on the nature of the poisoning which takes place. It is in fact of the very kind to be successfully controlled by measures wisely conceived and prudently initiated. A plea much stronger than the statistics of their prevalence is to be found in the nature of the greater number of cases of poisoning which annually take place in the province.

(To be continued.)

A MIRROR OF PRACTICE.

CONGENITAL FÆCAL (UMBILICAL) FISTULA.

By SURGEON-CAPTAIN PATRICK HEHIR, M.D., F.R.S.E.,
F.R.C.S.E., D.P.H. (Cantab.) I. M. S.

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INSTANCES of *fecal fistula* are not so common as not to be noteworthy when one happens across them. The following case presents in addition a few features not generally met with in this morbid state.

KHOOLSUM BHI, *et. 7 years*, female, suffering from a foul umbilical ulcer, was brought to the hospital on Saturday, the 26th August 1893, by her mother, who stated that the child had suffered off and on for the last five years from an ulcer of the umbilicus. The history of the case pointed to the fact that for the first two years of life the child was comparatively well, that there was always a certain amount of swelling to the right of the umbilicus, but that during this early period of life there was never any actual ulceration, although on two or three occasions there was a certain amount of redness, and what appeared to be an inflammatory swelling.

After that age, on the first occasion of its becoming serious, the swelling gradually increased in size and eventually an abscess, about the size of a small orange, burst and set free a quantity of pus, but the wound soon healed up. Subsequently, this occurred once or twice every year, but it was noticed that for the last two years it not only attained to a larger size, but was longer in developing and slower in healing after rupture, and during the developing stage gave rise to severe distress, rigors and fever and the intervals now are seldom longer than three months, whilst the child suffers intensely during some of the attacks of inflammation.

The mother's description of the later attacks was somewhat characteristic. She stated that a swelling with redness and pain appears over the navel, extending for about one inch to the right. After this continues for three or four days, the swelling bursts and a quantity of pus, followed by actual fecal matter, would be discharged, the swelling then goes down, the opening gradually gets smaller, and finally closes; nothing being then visible till the next attack, which now came on in three or four months.

Present condition.—On examination I found a hard inflamed swelling, the inner semi-circumference of which embraced the umbilicus, whilst the outer half of the circumference extended to about 2 inches to the right and somewhat below the umbilicus. It appeared as a hemispherical protrusion above the general level of the external surface of the abdominal wall, and was exceedingly tender, but fluctuation could not be felt. The swelling appeared to extend deeply into the abdomen on the inner side of the right iliac fossa, and somewhat below the normal position of the caecum. The temperature was 100°F, the tongue foul, bowels not open for two days, the body emaciated. There was no vomiting, the patient was put to bed and an application of extract of belladonna and opium covered with a poultice, to be changed every two hours was ordered, and internally a mixture of drachm doses of sulphate of soda with $\frac{1}{2}$ of a grain of tartar emetic was given every two hours, with milk diet. An enema

was given after the fourth dose of the mixture, and the bowels then began to act freely. During the night the patient suffered from a severe rigor, and next evening the temperature was found to be 102°F. The treatment was continued for three days more, as no fluctuation could still be felt. After this, however, distinct fluctuation was felt on the fourth evening, and we were to have opened it next morning. During the night, however, the abscess burst in the usual place through the umbilicus and discharged about 3 ounces of putrid, highly offensive, faecal smelling pus.

On examining the wound thus created, it was found that there was a faecal fistula opening in the position named, which passed in a direction downwards, backwards and to the right, the whole length of an ordinary pocket case director passing into the bowels, and impinging upon what appeared to be the caecum, for the point of the director could be felt in the position of that part of the large bowel.

As I considered the case to be one necessitating a laparotomy; first, for exact diagnosis, and next for curative treatment, I suggested this to the mother, explaining what we thought to be the nature of the case. She, however, declined all operative measures, stating that I might use internal remedies and external applications. As I said it was impossible to relieve the child properly in this way, she left the hospital. I have seen two cases of this kind, and both we believed to depend upon imperfect or incomplete development, being due probably to a patent omphalo-mesenteric duct passing from the appendix vermiformis to the umbilicus. That the fistula communicates with the large bowel there could be no doubt, because the end of a long probe passed the fistula and could be felt at the right side of the caecum, and it must, of course, have passed through its whole diameter to have been felt there.

The diagnosis in the first case I was able to verify by operation which consisted in closing off the duct from the inner end of the appendix vermiformis at one extremity, and again at the umbilical end. The patient was well in a fortnight, and for the last 17 months has been quite free from the former attacks.

DEPRESSED COMMINUTED FRACTURE OF THE SKULL; TREPHINING; RECOVERY.

By JAMES R. WALLACE, M.D.,

BUNNER, a native female, aged 17 years, was admitted into the Kashipore Hospital (Terai District) at 8 P. M. on the 10th April 1879, in a state of insensibility, with an injury to the head. The following day, while passing through Kashipore in medical charge of a detachment of British troops, I was asked by the Assistant Surgeon of the hospital to see the case. He told me he suspected fracture of the skull.

The history of the patient is as follows:—Two hours prior to her reception into hospital, the woman had an altercation with her husband, who struck her with a hatchet on the top of the head. She fell senseless, bled profusely from the wound inflicted, and was brought to hospital, where, after a few hours, partial sensibility was restored, but the patient, though answering rationally, seemed very irritable when roused up, and remained in a

dull stupor all night and throughout the following day; nausea and vomiting were constant; there was frequent yawning; breathing was slow and shallow; the act of expiration was accompanied by a blowing out of the lips and cheeks; the pupils were contracted, and the pulse hard and full. I saw the patient at 5 P. M. on the 11th, and on removing the dressings applied to the head, I found an incised-looking scalp-wound in the upper parietal region about an inch and a half in length, and on passing my finger into it, felt the bone beneath distinctly fractured and depressed, to an extent that was almost incredible, judging from external appearances. The fracture extended transversely across the mid-parietal region, from one parietal eminence to the other. On the right side an area of 3 by 1½ inches of the bone was depressed about half an inch below the surrounding level. The symptoms as well as the condition of the injured parts clearly indicated both compression and irritation of the brain, set up in all probability by extravasation of blood upon its surface and spicula from the fractured cranium in contact with it. I accordingly recommended operative interference without delay. At 5 P. M. the patient was placed under chloroform, I enlarged the wound by an incision to the right side, and made another at right angles to it downwards, parallel to the external occipital crest, reflected back the flaps, and finding it impossible, as the fragments of the depressed bone were so firmly wedged in, to attain my object by means of an elevator, I applied the trephine near the anterior superior parietal angle about an inch from its apex, so as to overlap a portion of the depressed bone: this circular piece removed, the inner table of the fractured bone was seen to be detached and driven in. I now raised the bone and extracted with the forceps a sharp, triangular spiculum of the inner table, which had pierced the membranes and entered the brain; several other smaller fragments were now removed with a large blood-clot which pressed upon the meninges; a gentle stream of water was poured over the surface to cleanse it of all adherent particles; the flaps were adjusted in apposition to induce union, and light water dressing, kept constantly moist by a syphon suspended above the head of the patient, was applied; and perfect rest, with a plain unstimulating diet, were enjoined.

12th April.—At 4 A. M., before leaving Kashipore, I saw the patient, she was perfectly conscious; stated that she had passed a tolerably fair night; that her bowels and bladder had both been naturally relieved since the operation; that she felt much better, and only complained of slight headache; her skin was moist and warm; her pulse calm, and her pupils normal. I left her without disturbing the dressing on the wound, and for the notes of her subsequent progress I am indebted to the Assistant-Surgeon of the Kashipore Hospital.

12th April, 6 P. M.—Complains much of pain in the wound; no vomiting, retained the milk and soup given her. Pulse small and quick; skin hot; tongue slightly furred; no bleeding from the wound.

13th April.—Headache continues; slept well; bowels inactive; tongue drying; pulse quick; no change in wound. Ordered five grains of calomel; milk diet.

15th April.—Pain in wound less; a thick purulent discharge from wound; tongue clean; pulse full; skin

warm; bowels evacuated twice yesterday and to-day. Complaints much of thirst; refrigerant drinks given; carbolic dressing applied to wound.

16th April.—Feet much better; wound looks healthy; some small granulations appearing; discharge continues; no headache; bowels active; appetite good. Repeat dressing and diet as before.

18th April.—Slightly feverish to-day; thick purulent discharge from wound; some small particles of necrosed bone have come out with the pus; bowels not moved; calomel given; wound well syringed with weak carbolic solution; continued dressing.

25th April.—There has been more or less fever the last few days, but the wound looks healthy, the flaps have not contracted; a portion of the contused scalp has sloughed away to a small extent near the centre of the wound, but this point is covered with healthy granulations; discharge of pus continues, but very scanty now. Repeat dressing, drinks and diet. No other untoward symptom manifested itself, and the case progressed favorably; the wound was quite healed ten days later, and the patient only slightly debilitated, was discharged from hospital cured on the 9th May 1879, or twenty-eight days after the operation.

Remarks.—This case seems clearly to illustrate the three conditions of the brain which often follow each other in a quick succession of stages, in injuries of this nature, namely, (a) *Concussion*, or stunning dependent upon commotion or sudden disturbance of the cerebral mass, noticed immediately as the blow was received; (b) *Compression*, marked by a gradual retrogression to unconsciousness, after the patient has rallied from the primary shock, and dependent upon extravasation of blood beneath the cranium, either within or external to the membranes; (c) *Irritation*, a condition which usually precedes inflammation of the encephalon and meninges in these cases, when a spiculum of bone is driven down and presses upon the cranial sac and its contents.

The *expectant treatment* advocated by ABERNETHY, SIR ASTLEY COOPER, DUPUYTREN and others, it is evident could not have been effectual in this case, for not only would it be contra-indicated by the extensive depression of the bone which was present, but injury to both the brain and its coverings, as revealed by the operation, amply justified the measure resorted to. Failing this, inflammation would have been an inevitable sequence. While at the Calcutta Medical College, I remember to have seen two such cases as the one I have recorded, both in the late Professor GAYER's wards. In one treatment was delayed in the hope that urgent symptoms would not manifest themselves, but the patient died from encephalitis; in the other instance the extent of the fracture was all that seemed to justify surgical interference, no urgent symptoms were present; DR. GAYER trephined, and the patient made a rapid recovery.

THREE CASES OF SEVERE SUICIDAL THROAT-WOUNDS: RECOVERY.

By ROGER G. S. CHEW, M.D., C.M., M.S.C.,

Calcutta.

IN January 1877, I was attached for duty to the Allahabad Fort Hospital, where one morning Private K.—of the—Fusiliers, was brought into the ward in an unconscious state with his tunic saturated with blood. Examination showed two incised wounds, the superior cutting obli-

quely through the upper half of the pectenus *Adami* and about 2.5 inches long, while the inferior wound which was 3.25 inches long, cut through the trachea.—0.25 inch below the larynx and lacerated the oesophagus. The teeth were clenched, pulse weak, and at every expiration, air bubbles and blood were forced through the lower wound; but the large vessels of the neck were not injured by the razor with which the cuts were inflicted. No reason was alleged for this attempt at *felo de se*. After washing with boracic lotion, the edges of the wounds were brought into apposition and kept *in situ* by narrow strips of adhesive plaster crossing each other at short intervals. No sutures were applied, and the patient was kept quiet in bed. His temperature rose to 105°F that evening, and there was some delirium; but next morning febrile symptoms abated and he made a rapid recovery; the wounds healing by first intention. For the first four days, and until there was distinct evidence of healing by first intention, the patient was fed by allowing drops of beef-tea to trickle down his throat every 4 or 5 minutes, as he refused to be fed by the stomach pump tube; and after the sixth day he was able to swallow fairly large quantities of fluid with very little pain and trouble.

Case II (1879).—An Afridi, in consequence of a quarrel with a relative, ran a fish-knife through his throat, making a fearful gash six inches long and running transversely with jagged edges from the middle third of left lower jaw right down to the sternal end of the clavicle, but luckily the large vessels were uninjured. The patient being intensely weak from loss of blood, and symptoms of lung complication being present, he was not chloroformed. A tracheotomy tube was passed into the windpipe, bleeding was stopped by torsion of the points, the wound freely irrigated with 1 in 1,000 carbolic acid solution, and a very long narrow strip of gauze having been placed plug-wise inside the upper trachea; the edges of the wound were brought together and herring boned with carbolic catgut sutures—one end of the gauze being brought outside the wound to act as a drainage tube—and the whole capped with a gauze pad. Delirium with fever supervened and the patient who was unconscious for nearly three days, was fed by enemata in half ounce doses every hour, and given subcutaneous injections of quinine in the intervals of the febrile paroxysms. The plug was removed on the twelfth day and fever abated on the 25th, when he was fed *per os* with liquid food. He made a complete recovery in five months, but the tracheotomy tube was not removed till nearly two years afterwards, when a plastic operation became necessary to close its site of puncture. This tardy recovery was due not so much to the severity of the wound, but to the insanitary surroundings of the patient who lived in a village near Junrood on the Afghan frontier and refused to be brought into cantonments where he would have had better attendance.

Case III.—An Egyptian soldier, name unknown, was shot through the loins at the moonlight raid on Kassassin (Egypt 1882) and the agony of his wound—though nothing vital was injured—prompted him to put an end to his sufferings by thrusting a large pen knife through his throat and forcing the blade outwards and away from him. He couldn't blow his brains out as he had no ammunition left. The left sternocleidomastoid was cut, and the back of the larynx could be seen. A gaping wound which was 3.5 inches long by 4.25 inches broad. Antiseptics and sutures not being available, the sand, dust, &c., were washed out, the cut surfaces were brought in apposition and held in place by adhesive plaster, while the wound in the loins was washed with canal water and plugged with lint soaked in carbolic oil. (1 in 60). To the surprise of every one the man made a complete recovery of the throat wound in three weeks, and of the bullet wound in as many months.

Indian Medical Record.

18th February, 1895.

DR. ERNEST HART ON MEDICINE AND ITS PRACTITIONERS IN INDIA.

THE excellence of the address delivered by DR. ERNEST HART on the last day of the Indian Medical Congress meeting of 1894 is admitted on all hands. His acquaintance with all current opinions and with all progress made in medical matters with which the profession in this country is particularly concerned, and his easy and impressive style of putting these matters before his hearers have received general commendation; and his unique opportunities for keeping himself well abreast of the times in professional concerns, is great justification for the assertive and authoritative stand which he took from time to time in the course of the address. It would have been better, however, had DR. HART confined himself "to the more engrossing scientific and practical questions which concern the future of medicine and the welfare of the seething masses of humanity entrusted to our care;" for with regard to these, as we have said, he may be accepted as an authority; but he was particularly unfortunate in his remarks on those subjects which are not "free from polemical and personal differences of opinions," as he said of the conditions and history of the profession in India. These remarks have much of the usual characteristics of the globe trotter's collection of contributions furnished and received from interested sources—PREJUDICE in authority. With all the professional and intellectual acumen of our respected friend DR. HART we fear that his faith in some of his educators has been too great, and he has been evidently regrettably beguiled into statements and opinions in connection with the medical services of the country which, to say the least, are not strictly correct or which cause false impressions. However much DR. HART has endeavoured to make his utterances appear free from all taint of bias or prejudice against any section or sections of the profession in India, there are a few inconsistencies which we are at a loss to understand and explain, and a few statements which shew that he has been incorrectly informed, wrongly impressed, or that he has unfortunately misunderstood his informants. For instance DR. HART remarks that "the service of Government is open to all who can satisfy the conditions and requirements laid down by Government." This is far from correct. It is true, with regard to the Indian Medical Services only, and this only after eliminating, as we do now, the rumoured attempts to exclude Indians, as far as possible, from this service even. In the civil departments, however, of the State non-service men are positively kept down. They are scarcely ever admitted to any of the higher offices; and this, notwithstanding the fact, admitted by DR. HART himself, that these non-service men are "a considerable and increasing number of those who proceed to Britain for the purpose of medical study, and return to India with British diplomas and degrees;" and that they comprise a large number of "British licentiates and graduates who have proceeded to India for the purpose of earning a livelihood." Even with the fullest

compliance with all the conditions and requirements demanded by Government, a non-service man *cannot*, but in the most exceptional instances, get a college professorship, a chemical examinership, or any Government appointment worth having. Is there not a positive reservation of these appointments for men of the Indian Medical Service? DR. HART, no doubt, wishes to give the Government full credit for "Fair Play," and perhaps thinks that everything is fair and square inasmuch as the Indian Medical Service, for which these appointments are reserved, is thrown open to all creeds and classes alike. He appears to lose sight of the fact that, to gain an entrance into the I. M. S., one of "the conditions and requirements laid down by Government" for the obtaining of these appointments is to create a reservation of appointments for a staff of highly paid military officials to the unjust exclusion of those who "return to India with British diplomas and degrees" and of those "British licentiates and graduates who proceed to India for the purpose of earning a livelihood." Moreover, is it not next to impossible for men of the purely civil medical services of the country, possessed of full British qualifications, and with all the advantages of service and of experience, to obtain any other but the subordinate or the less important appointments of the State? If then in saying that "the service of Government is open to all who can satisfy the conditions and requirements laid down by Government" DR. HART was cognizant of and fully considered the fact that admission into the I. M. S. is a *sine qua non* for most or all of the most important and coveted appointments, he appears to view with complacency an injustice inflicted on a very large section of the profession in India.

We are obliged to make rather a lengthy extract from DR. HART's address for our next consideration. Taken in connection with a great deal that is said and urged later on in his address, the extract appears full of incongruities and to betray a national prejudice. No one who is well conversant with the medical organisation of this country will, after a careful perusal of DR. HART's address, look upon our much-respected and learned friend as an Oriental Solon; nor can DR. HART expect to have his utterances in the matters in question regarded as coming from one who is an "authority" on the medical administration and working in India, however much his opinions on purely scientific questions are to be respected. "It has been urged," says DR. HART, "that it is the duty of the Government to utilise more largely indigenous medical agencies, and it has been argued in some parts of India, that an equally efficient and considerably less expensive medical service, more especially for civil duties, can then be obtained. The cry of 'India for Indians' has been raised in this connection. It is to be noted, however, that this cry does not come from the Indian members of the profession, but from a few non-official Anglo-Indians, and much feeling has arisen in this connection. *Learn to have patience. Governments and such like institutions move slowly.....* The Government must be trusted for knowing the purposes for which its servants are required, and adopting the best means of obtaining these of the best quality and at the cheapest rate." We have taken the liberty of italicising a few portions of the foregoing, which perhaps contains

admirable advice; but Dr. HART is evidently no believer in his own preaching. If our worthy friend had such implicit faith in our Government as to feel that it "must be trusted for knowing the purposes for which its servants are required, and adopting the best means of obtaining these of the best quality and at the cheapest rate," why did he worry himself unnecessarily in pointing out the "needs of the Army Medical Department," the formation of a Royal Medical Corps, the inequality between the treatment of the Medical Staff and of other corps in the matter of Government grants for messes, the necessity for replacing the Army hospital native corps with the infinitely more expensive medical staff corps, &c.? Wherefore, all these suggested expensive innovations Dr. HART, when the statement that the Government must be trusted for knowing its own purposes and how to effect them most cheaply according to your own saying, may be accepted "as a true representation of the circumstances of the case"? Why not "learn to have patience as Governments and such like institutions move slowly" as is your firm conviction? To us the whole advice so paternally tendered by Dr. HART to Indians reads as an appeal to Indians not to push forward their just claims, lest the Government may come to recognise the efficiency and cheapness of indigenous medical agencies. It reads very much like "withhold your claims yet a while Indians; we Britishers may be deprived of much which we, by special favor, enjoy; and besides we would much like to have a little more." And this cry of 'India for the Indians,' he it noted, is the result of the unwarrantable interference of a *few non-official parties*. We would like to know at what pains Dr. HART has been to determine "that this cry does not come from the Indian members of the profession." We would certainly have thought that any body with the most ordinary acquaintance with Indian affairs knows well that 'India for the Indians' has been the cry of the rapidly increasing educated Indians throughout the length and breadth of the land, not only in respect to each and every branch and department of the public services. Flagrantly erroneous statements, such as we are now considering, detract much from the merit of Dr. HART's address, and betray a susceptibility to false tutoring, or an easily-imposed-upon credulity; and it is hard to say how far these have influenced all the other opinions which he has so authoritatively expressed. Here is another assertion occurring at the tail end of the address, which makes this veteran medical journalist appear very gullible and credulous. "A second obstacle to the successful cultivation of medical research in India is the over-loading of the medical officer with clerical work of the most menial character, and which might be very well and much more economically done by a less highly paid and less valuable officer. I have been told that the case books in many instances tend to be filled with the cases of patients requiring extra diet and not with important cases. I understand that every insignificant case to which an extra egg, or such like, is presented *must be written out in full*, while perhaps some cases of medical interest may be neglected. This is a sad and surely avoidable waste of time and energy, and so throughout the whole of his duties perpetual writing and red-tapism, medical officers tell me, they have to spend more time in their office than in their

wards." The italics are mine. The whole of the foregoing extract displays a very confused idea of the matters to which reference is made. Medical officers spoken of as being hampered with menial clerical work. Are the medical officers men of the I. M. S., or M. S. or of both, thus mercilessly piled with clerical labor? We will try and enlighten Dr. HART on these matters. Medical officers of the army in civil employ as District and Civil Surgeons, have no doubt varied duties and heavy responsibilities; but they are in all instances provided with clerks, and the only writing work that they themselves do is the keeping up of their cases. This surely cannot be regarded as "clerical work of the most menial character;" and in the case of these officers, the regulations demand that *all cases of interest* should be recorded, and the diets or extras given have nothing whatever to do with the necessity or otherwise of a case being taken or recorded. This ruling applies only to station hospitals, and Dr. HART's remarks are evidently made from information received regarding the duties of officers of the medical staff in station hospitals. But even with regard to these, what Dr. HART has been told and what he understands are open to much correction. To refute what Dr. HART has been told and what he understands "that every insignificant case to which an extra egg or such like is prescribed, *must be written out in full*, while perhaps some cases of medical interest may be neglected." We invite Dr. HART's attention to para. 685 A. R. I. Vol. VII, which says: "Every important case in hospital, and all such as are in receipt of extras (other than effervescing liquids, drinks and eggs) will be recorded in the case-book, &c." This surely is absolutely the reverse of what Dr. HART has been told and what he understood to be the case. As a matter of fact, medical officers of station hospitals are careful in avoiding to prescribe extras which involve case-taking, except where such extras are absolutely necessary for the well-being of the sick. We need not minutely detail the clerical work of medical officers of station hospitals, but irrespective of the office work, for which the senior officer in charge is responsible, and which is carried out by a clerk, all the clerical work that the other medical officers do, consists almost altogether of the prescribing of diets to the few patients in their charge, keeping up the records of a few important cases, and of their weekly sanitary report of the barracks. None of these surely is of a non-professional or of a menial nature. If Dr. HART had been at the least pains to see and judge for himself, he would have known that a working day of an officer of the Medical Staff in India consists of about *three short hours* and in many—very many—instances, of *infinitely less*. If, under the circumstances, these medical officers cannot find time for research and investigation, there must indeed be "a sad and surely avoidable waste of time and energy," which certainly is not due to "perpetual writing and red-tapism." We feel sure that the most serious and matter-of-fact officer of the Medical Staff in India would not be able to suppress a smile in perusing Dr. HART's doleful representation of this "overloading of the medical officer with clerical work of the most menial character." We fully agree with Dr. HART in that this work "might be very well and much more economically done by a less highly paid and less valuable officer," by the Medical Staff of station hospitals being composed of

better paid Military Assistant Surgeons, under one member of the Medical Staff, of service and experience, as a consultant. With the Medical Staff of a station hospital composed of an experienced Consulting Surgeon in charge, with Military Assistant Surgeons as co-adjutors in the treatment of the sick, and an efficient Army Hospital Corps, European, Eurasian or Native, the military medical needs of the country will be thoroughly and amply met. Dr. HART is justly proud of his position as Editor of the *British Medical Journal*—a position in which he enjoys, as he asserts, "what are perhaps exceptional opportunities of gauging the times, of learning what is being done in things medical all over the world, and of perceiving perhaps what is the best thing next to be done." In many instances, as we have shewn, he has not taken sufficient advantage of those exceptional opportunities, and "the best thing next to be done" by Dr. HART, is to learn not to believe what he is told even by medical officers, for some of these may play him false, especially in the matter of "the Medical Profession in India: its position and its work" (clerical and professional) but for him to see and judge for himself in these matters.

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THE INDIAN PASTEUR INSTITUTE.

As the opposition of the Bengal Branch of the Anti-vivisection Society to the proposed Indian Pasteur Institute has prevented some from subscribing towards the Institute, Surgeon-Colonel HARVEY, in a paper read at the Indian Medical Congress, endeavoured to shew that experiments on living animals are not only justifiable but necessary, and that donations to the proposed Institute may be given with a clear conscience. Dr. HARVEY made two divisions of the subject: (a) vivisection proper, which alone involves cutting operations on living animals; and (b) experiments on animals not involving cutting operations. The first of these involved the death of the animals; the second involving temporary pain or discomfort only. The opponents to vivisection wrongly include all the foregoing under the term vivisection. He summed up the opposition arguments to be (1) that animals have rights as well as men, and that one of these rights is to be saved from cruelty. (2) That the experiments lead to little or no useful or practical result. (3) That even if they did, the cruelty which they involve makes them unjustifiable, since man has no moral right to inflict cruelty for his own advantage. (4) That the experiments have a demoralising effect on those who perform them. (5) That it is a hellish practice and goes hand-in-hand with atheism.

The scientific arguments are: (1) that the experiments are necessary for the advancement of knowledge, and that this necessity is recognised almost without exception by the medical profession. (2) That they have in fact "been of inestimable service to man and to the lower animals, and that the continuation and extension of such investigations are essential to the progress of knowledge, the relief of suffering, and the saving of life. (3) That they are conducted under Parliamentary restriction without cruelty, and with the least possible suffering. (4) That the statements of the anti-vivisection party are inaccurate, exaggerated, and misleading. (5) That suffering and

sacrifice are facts in nature which . . . can effminate, and that the rights of man are superior to those of animals. (6) That the experiments have no demoralising effect on those who perform them.

Dr. HARVEY was of opinion that the term vivisection should not be applied to experiments performed under chloroform in which the animal is killed without recovering its senses, and which involve no pain; or to the killing of animals by poison, or snake-bite; or to the feeding of them with particular varieties of food, &c. Again the profession and physiologists give to the word "cruelty" the accepted English meaning, *viz.*, "an act which causes extreme suffering without good reason." "A disposition to give unnecessary pain." The experimentalist therefore cannot be charged with cruelty, as the experiments are not unnecessarily undertaken, and they are productive of good to men and animals. The anti-vivisectionist however takes cruelty to mean "the voluntary infliction by a moral free agent on a sentient being, of severe pain, not beneficial to the sufferer, and not authorised by justice." By thus throwing the dictionary out of the window and adopting a new ethical standard the anti-vivisectionist denounces the experimentalist as cruel. It was important, Dr. HARVEY said, to keep this in mind. Considering the objectors' arguments then *seriatim*, he said that physicians and physiologists maintain that man has dominion over animals when good reason can be given for subordinating their rights to his. As to the objection that these experiments lead to little or no useful result, the testimony of the medical profession should outweigh the opinions of others: and with very few exceptions, the profession says it has been helped by these experiments. Resolutions to this effect were passed at the British Medical Association General Meeting at Nottingham in 1892; the International Medical Congress at London in 1881; and the Church Congress at Folkestone in 1892: while the Royal Commission appointed at the instance of the objectors in 1875, concluded that the greatest mitigations of human suffering have been in part derived from these experiments. The circulation of the blood, the physiology of respiration, the functions of the spinal nerves, of the liver, and thyroid gland, the localisation of the motor areas in the brain, &c., have all been learned from the Baconian principle "interrogate nature." Physiology deals with life, and vital phenomenal experiments in that science must necessarily be on living creatures, since death puts an end to living functions. In objecting to such experiments, physiology is condemned to stagnation, and an end is put to progress in medicine and surgery, which are founded on a knowledge of physiology and pathology. With regard to the third objection, *viz.*, that even admitting the utility of the experiments, they are unjustifiable on account of the cruelty involved, as man has no right to inflict cruelty for his own advantage. This must, if true, be accepted universally and always. It leads by strict logical necessity to forbid the killing of animals for food, and puts an end at once to practices now universally followed by man for his convenience, sport, or profit, the gratification of his personal variety, or his bodily appetites. In angling, in riding a fox to death, and in castration, which is vivisection of the most painful kind, man constantly inflicts severe pain not beneficial to the sufferer. Those then who drive

geldings and eat capons are participators in offence. All these practices deserve to be decried as cruel just as much as the physiologist's experiments. Has not a mosquito rights, is a bug not a sentient being? Are their sufferings beneficent to them? Every pious Hindu, who has ever seen a cat killed, shudders at the sight. The same applies to anathema. With the clubbing to death of seals, the destruction of unoffending birds when feathers are to be worn, the use of painful gag-bits and bearing reins, the jinxing of fowls, the subjecting of geese to grave disease, boiling lobsters, &c., all mankind, according to the antivivisection definition of cruelty, are guilty as well as the vivisectionists. These latter are doing what all mankind are constantly doing, viz., subordinating the interests of individual animals to the general welfare of humanity and of animals themselves; and their action is justified, both by necessity and by ethics. Justifying themselves they justify also all such actions of other men as do not involve wanton, unnecessary and objectless suffering.

As to the demoralising effect of the experiments on those who performed them, Dr. HARVEY remarked that there were no keener fishermen than the clergy, and yet we did not find them demoralised or converted into base and brutal monsters. Dr. HARVEY was proud to number among his friends several vivisectionists, and knew them to be humane and honorable men. Oppositionists, say nothing or little of the object of the experiments; the use of anaesthetics is either not mentioned or brushed aside as not really abolishing pain; results are sneezed at as useless; and symptoms occurring in insensible animals are accepted without question as evidences of acute agony. The opposition of anti-vivisectionists is based on untrue and exaggerated statements.

Dr. HARVEY considered a Pasteur Institute necessary for India, and asked the Congress to help to convince the public that such was the case by unanimously affirming the following resolution:—"That a Pasteur Institute for India is essential to the advancement of science, the investigation of Indian diseases in men, animals and plants, and the treatment of diphtheria as well as of those bitten by rabid animals." This resolution was carried unanimously.

Professor HANKIN of Agni, in seconding the motion, said that, under a license, he carried out in England perhaps a larger series of vivisections than were done by any one else at the time in England, and he did not believe that he ever in his experiments gave a single animal more trouble or pain than is given to a child in vaccinating it. Mr. HANKIN said it is to be noted that such trivial operations as taking a minute drop of blood from a rabbit's ear are of the kind most prized by antivivisection agitators, as they are of the kind done without the aid of anaesthetics. These agitators went round the country parading such experiments as examples of the horrible sufferings inflicted on animals by physiologists; and by such action the anti-vivisectionists have become thoroughly discredited at home; and Mr. HANKIN would be sorry if any one in India thought it necessary to give much attention to anything they say.

It is rumoured that the worthy President of the Congress is to be honored with a C. S. I., and the two able workers of the Hyderabad Chloroform Commission are to obtain the decoration of C. I. E. in the next Birthday Honors List. Certainly we hope the rumour is well founded, as fitter recipients for such honors, could not be found.

COMMENTS AND NEWS.

FEIGNING OR MALINGERING.

FEIGNING, for which there are several motives, and which is frequently resorted to, occurs in three forms:—(1) *Entire*, where all the symptoms are merely presented. (2) *Partial*, where the symptoms of any disease or injury already existing is exaggerated; and (3) *Artificial*, where the disease or injury or symptoms simulating them are produced by the patient for the purpose of deceiving. As feigning is but a species of fraud and the exposure of fraud is a public good, Dr. H. C. FAIRBROTHER points out the humiliating position of the medical man who has been victimised by the malingerer, and tender certain general rules which aid the investigation of malingering. (1) *Moral character if it cannot bear scrutiny or has a tendency to falsehood* is of great aid in the detection of feigning. (2) *Motives*, whether pecuniary gain or profit or advantage or exemption from some irksome duty, may not accrue to the party feigning. (3) *Physical condition* will excite suspicion if the color of skin or the features are not indicative of the serious illness or injury that the patient alleges to suffer from, or if his general appearance indicate perfect health. (4) *Expression of countenance* is an important factor towards detection, and so is *manner of answering*, as a person feigning will seldom or never look his medical examiner in the face or answer his questions fairly, clearly or squarely. (5) *Want of consistency*. Malingers not, as a rule, being medical men are apt to over-act or over-do the symptoms of the disorder feigned. Though the diseases simulated are legion, insanity, paralysis, convulsions, stiffness of joints and defect or loss of special senses form the most common roll of alleged affections; PAIN forms the *stock-in-trade* of the malingerer, because pain is the most easy to complain of and the hardest to contradict, yet pain is such a dreadful reality that it cannot be long hidden if it exists and pretend pain, like murder will discover itself when the culprit least expects it. Pain itself is complained of under three headings:—*1st.*—What the patient alleges, and you can't at once contradict except his countenance give him the lie, and you can manage to catch him unawares by secretly marking the spot and jabbing at it when he does not expect it. *2nd.*—What is elicited by pressure, palpation and physical examinations, and which, if simulated, can be detected by the above method; and *3rd.*—Pain on motion of the body, and more particularly of the joints; but when the patient's expression of countenance betrays or careful watching of the culprit will detect or the man may over-do his symptoms by unwarily raising or moving the limb to a height or in a direction that he said he could not achieve.

DR. GRAY AND THE JAMSHETJEE JEEJEEBHAY HOSPITAL.

PUBLIC opinion having been rather severe on the late outbreak of cholera at the Jeejeebhoy Hospital, which was alleged to be "ill-kempt in some essential respects," Dr. WELLINGTON GRAY comes to the rescue by saying that year after year the grave sanitary and structural defects of this hospital had been made public, while the hospital authorities had done all that, under the circumstances, they could do to prevent infection and preserve asepsis, but it was no fault of theirs if the walls, floors and the location of the hospital rendered conditions favorable to the invasion, propagation and preservation of disease germs. Besides this he had forwarded to the Surgeon-General several complaints and suggestions, some of which had in course of time been acted upon and the others for the most part had been pigeon-holed. Why these letters were not taken prompt notice of does not transpire; but a contemporary submits that a great many more have been ignored in pursuance of the principle that one of the crowning merits of a Surgeon-General is to run his hospitals cheaply, as economy is nowhere more appreciated—and sometimes rewarded—than in the Surgeon-General's Department.

WANTED: A STRINGENT PHARMACEUTICAL ACT FOR INDIA.

We quite agree with our contemporary, *The Times of India*, in his remarks on the necessity for legislative enactment to prevent the sale of bad medicines, and the issue of badly or wrongly dispensed prescriptions. The bazaar dispensers of doctor's prescriptions, if not drawn, as our contemporary asserts, from a class very little above a coolie or a table boy, certainly in the vast majority of cases know little or nothing more of drugs than a very imperfect knowledge of their names. Order and arrangement of their stock-in-trade are matters of which these dispensers are dangerously ignorant; and the careless way in which poisonous and non-poisonous drugs are placed in juxtaposition, makes us quite sure that the bulk of the Indian public, whose safety in the matter of drug-dispensing is the scantiest conceivable, has infinitely more to thank Providence and their guardian angels for, than they throw off. The chances of wrong administrations and dispensings are almost countless, and it is useless for us to try to enumerate them. With dispensers of this kind (particularly if they are proprietors too of these medicine shops) drugs are never considered as too old; and their deterioration, however advanced, does not stand in the way of their being got rid of in the form of mixture, pill or powder. The purchasing public is, no doubt, a great deal to blame for this pitiable state of affairs, for it considers nothing more than the cheapness of the make-up, or we should more correctly say, the low charge for the dispensing of a prescription. It inwardly admits but practically ignores the fact that in dealing with these ignorant compounders the chances are that it is throwing away its money on dangerous or worthless concoctions.

HOSPITALS FOR GENERAL PRACTITIONERS.

The Medical Times and Hospital Gazette makes, what it believes to be a very feasible suggestion for general practitioners protecting themselves against the pecuniary losses they sustain by public hospitals and ignorant and inexperienced chemists, depriving them of patients who can well afford to pay for proper medical attendance and advice. Our contemporary thinks that it is useless to appeal to the State for help in these difficulties, and that general practitioners must work out their own professional salvation; and that the simplest and best way of doing this is for general practitioners to combine and open hospitals to be managed by themselves. A number of practitioners working in a given district should combine and act both as the committee of management and also as the medical staff. The suggestion appears to us to be quite good and practicable; and we would even predict that in India general practitioners would receive the support of Governments in this suggestion being acted upon. It is likely that the Government will be glad to be relieved of some portion of its expenditure on hospitals and dispensaries; and it may be found willing to make over some of its buildings and equipment, under certain conditions, to reliable and well-organised medical staffs. This will be a means of teaching the people to help themselves in the matter of medical relief. We strongly commend the suggestion to the careful consideration of our financially better circumstanced brethren.

THE PARSEE MATERNITY HOSPITAL, BOMBAY.

The Bombay Esplanade presented quite a gala appearance on the 12th ult., and a huge assemblage of Europeans and Natives was present when LORD HARRIS threw open the *Parsee Maternity Hospital*, which is destined to be of inestimable service to the Parsee community of Bombay, and does no little credit to DR. T. B. NARIMAN, that indefatigable hygienic reformer and those of the community who largely responded to his call for contributions to erect a hospital where Zoroastrian progeny may be brought into the world without endangering the lives of their mothers by general septic invasions, the

(hitherto) almost invariable consequence of the time-honoured but rather perverse practice of badly ventilated and ill-lighted ground floor, lying-in and sick rooms for Parsee women, instead of providing them with airy upper rooms. LORD HARRIS cordially congratulated the Parsees for the spirit of self-help that led to the construction of this hospital; and DR. NARIMAN, while thanking his community for the valuable assistance rendered him, pointed out that the erection of the hospital is only the thin edge of the huge wedge of reformation that is needful for correcting the pernicious perversions of the Zoroastrian teaching, and saving the people from the wholesale murders that are perpetrated in their midst by ignorant midwives. The doctor also urged the necessity for supplementing the hospital work by opening a class where Parsee women may be educated in the duties required for sick nursing and lying-in rooms.

SUSPECTED POISONING CASES IN CALCUTTA.

DR. CHUNI LAL BOSE, M.B., F.C.S., one of the Chemical Examiners to the Government of Bengal, sends us the following report of five cases of suspected poisoning which occurred in Calcutta in January 1895:—

Case 1.—Soulamini Raur, Hindu female, of 120 Bow Bazar Street. *History as furnished by the Police:* Nothing known except that she had been drinking and was found dead in her room with her throat cut. *Opinion of the Police Surgeon who held post-mortem examination as to the cause of death:* Hemorrhage from the throat wound which was "homicidal." Viscera were forwarded to the Chemical Examiner to ascertain if she was first drugged and then murdered. *Result of chemical analysis of viscera and other substances:* Traces of alcohol detected; no other poison detected in the viscera. *Verdict of the Coroner's Jury:* Murder, but committed by whom, not known.

Case 2.—F. Webster, European male, 18 Ekbalpore Road. *History as furnished by the Police:* Lost his appointment and was unsuccessful in his efforts to get re-appointed. Was found dead in his room with a bottle of medicine in his pocket. *Opinion of the Police Surgeon who held post-mortem examination as to the cause of death:* Reserved. *Result of chemical analysis of viscera and other substances:* Chloral hydrate detected in the viscera. The bottle found with the deceased contained about 2 ounces of chloral hydrate. *Verdict of the Coroner's Jury:* Suicide by chloral hydrate.

Case 3.—Nayan Manjari Dasi, Hindu female, 365 Upper Chitpore Road. *History as furnished by the Police:* Had a quarrel with her husband who slapped her on the day of her death. Was found hanged in her room. Viscera forwarded to ascertain if she took any drug before resorting to the use of the rope. *Opinion of the Police Surgeon who held post-mortem examination as to the cause of death:* Hanging. *Result of chemical analysis of viscera and other substances:* No poison in the viscera. *Verdict of the Coroner's Jury:* Suicide by hanging.

Case 4.—Ram Lal Dasa, Hindu male, of Raja Nobokissen's Street. *History as furnished by the Police:* Had a quarrel with his kept woman. Was suffering from fever previous to his death. Body found in a decomposed condition in a room locked from inside. *Opinion of the Police Surgeon who held post-mortem examination as to the cause of death:* Reserved. *Result of chemical analysis of viscera and other substances:* Opium detected in the viscera. *Verdict of the Coroner's Jury:* Suicide by opium.

Case 5.—Kusum Raur, Hindu female, 56 Rutan Sirkar's Garden Street. *History as furnished by the Police:* Was suffering from some chronic disease, and often used to complain of being tired of her life. Was found unconscious in her room and taken by the Police to the Mayo Hospital, where she died.

Opinion of the Police Surgeon who held post-mortem examination into the cause of death: Opium poisoning. Result of chemical analysis of viscera and other substances: Viscera not sent to the Chemical Examiner as solid opium was detected in the stomach. Verdict of the Coroner's Jury: Suicide by opium.

OUR INDIAN JAILS AND PRISONERS.

INDIA numbers 37 central, 200 district, and 623 subordinate (or lock-up) jails, and the beginning of the year under report found 92,296 males and 3,000 female prisoners incarcerated in these jails. The admissions during the year were 430,836 males and 21,000 females; 430,918 males and 21,162 females having served out their sentences, the close of the year showed 92,214 male and 2,838 female prisoners still under sentence. Thus giving a total daily average of 94,964, of which the rate per 1,000 was 642 Hindus, 258 Mahomedans, 67 Buddhists and Jains, 13 Christians and 20 of other classes of convicts. The mortality per thousand was *high* in Coorg, being 75.56 and *lowest* in the North-West Provinces, where it was only 17.17. Over-crowded Bombay gives 25.44, Bengal 32.33, Burma 24.65, Madras 23.19, Punjab 26.60, Central Provinces 19.01, Assam 46.99 and Hyderabad Assigned Districts 28 per thousand; but when individual jails are taken, the figures are somewhat startling and lead to the conclusion that because the jail bird has been veiled enough to do what has brought him within the prison walls, he has forfeited his right to sanitary protection. Thus in three Burman jails the death-rate ranged from 111 to 131 *per mille*, while five Bengal jails give between 56 and 112. But energetic efforts are now being made with a view to reducing this mortality by improving the sanitary state of the food and surroundings of the prisoners.

CIVIL ASSISTANT SURGEONS AND HOSPITAL ASSISTANTS.

THE HON'BLE SURENDRO NATH BANERJEE, in his ably conducted paper, *The Bengalee*, in referring to the memorials recently submitted to Government says:—

"We are glad to find that the Indian Medical Association is making itself felt. Under the able leadership of Rai Lal Malhab Mukerjee Bahadur, it is manfully championing the cause of the Indian Assistant Surgeons. They are a useful body of public servants, but their position is not what it should be. The standard of qualifications is high—their remuneration small—their prospects are not what they have a right to expect. In the memorial which the Association have addressed to the Government, it is impossible to ignore the force of the arguments which are advanced. We await with interest the answer of the Government. In the meantime, if we are permitted to make a suggestion, we should advise the Association to continue the agitation which it has set on foot, and they are bound to succeed, because their prayer is so reasonable."

A WORD ABOUT YOUR BOYS.

MAKE home a pleasant place by treating your boy as though he were of some importance instead of a mere atom to be scolded. Furnish him with wholesome books and joining him in his reading, endeavour to draw out his opinions and thus help him to think for himself, but do not be too critical, lest he ceases to look upon you as his confidant. Actively interest yourself in all he does, and while teaching him orderliness and cleanliness be very careful of the courtesies, lest you dishearten him, for you cannot expect him to be thoughtful, tidy, respectful or kind unless you first set him the example. Never compare his shortcomings with the good behaviour, &c., of some neighbour's son, and above all do not keep him in ignorance of things that he ought to know; for it is not the plain truth, but the unwholesome way in which it is acquired that drives many a young man to perdition.

UNQUALIFIED ASSISTANTS.

THE General Medical Council of Great Britain has passed the following resolutions for the guidance of medical men who are under its jurisdiction:—

"A registered medical practitioner would render himself liable to the censure of the Medical Council in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner.

"That the Council recon on its minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract are, and if brought before the Council, will be regarded by the Council as charges of infamous conduct under the Medical Act."

PHYSICAL EDUCATION IN OUR SCHOOLS.

The Bombay Government recently resolved not to make physical training in schools and colleges compulsory, as was suggested to the Government. The Indian Government decided against the suggestion, after careful consideration of the opinions of the Director of Public Instruction and of the educational officers of the Presidency, as there was sufficient evidence of the physical training in schools and colleges being voluntarily availed of. We would again press on the consideration of the different Governments, and of the heads of all our educational institutions the very great necessity for arranging for the periodical inspection and examination of pupils by medical men, so that the serious danger of pupils being put to severe physical strains, or to exercises ill-suited to their physique and constitutions, may be guarded against.

THE MILITARY PUPIL CLASS IN CALCUTTA.

AT present there are 88 military medical pupils in the Calcutta Medical College. Thirty of these will leave college in a month as qualified Assistant Surgeons, and 25 more at the end of twelve months. The estimated allowances for this class should keep the total number of students at 100. If this were done, the college authorities could easily advertise for 48 vacancies to be filled up in another few weeks. We would be glad to see Botany, Hygiene and Practical Chemistry made compulsory subjects of the curriculum for this class instead of their being optional as they are now. It would also be a definite gain to Government if the Entrance Examination of our Indian universities were made the educational standard for admission to this class and if the course of study was prolonged to five years.

THE DISCOVERY OF ANÆSTHESIA.

A TABLET of bronze, to the memory of DR. HORACE WELLS, of Hartford, Conn., was unveiled on 11th December 1894, in commemoration of the fiftieth anniversary of the discovery of nitrous oxide as an anæsthetic. On 11th December 1844, DR. JOHN M. RIGGS, at WELLS's request, administered nitrous oxide to him and extracted a tooth under the influence of the gas without causing him any pain. The tablet bears a medallion portrait of HORACE WELLS, with the following inscription: "To the memory of HORACE WELLS, the dentist, who upon this spot, 11th December 1844, submitted to a surgical operation, discovered, demonstrated and proclaimed the blessings of anæsthesia."

A PRINCELY DONATION TO THE I. M. A.

HIS HIGHNESS SIR BHAGVAT SINGH, M.A., M.R.C.P., LL.D., K.C.I.E., THAKUR SARKAR OF GONDAL, Vice-President of the Indian Medical Association, has very kindly sent a donation of Rs. 500 for the Library of the Association. SIR BHAGVAT SINGH's gift is most thankfully appreciated by every member of the Indian Medical Association.

"A SILENT TONGUE SHOWETH A WISE HEAD."

THE recent experience of a Leeds doctor confirms the dictum that "silence is golden," for having on a dentist's enquiries given certain information regarding the health of a young lady whom the dentist was attending for her teeth, her young man inveigled the doctor into the young lady's house, and after forcibly obtaining the doctor's apology in writing, took further satisfaction in thrashing him. The doctor sued his assailant but the defence set up of provocation, was not admitted, and a fine of three pounds and costs, was imposed on the young lady's gallant protector. There is more than one reason for observing professional secrecy and reticence in respect to our patient's ailments.

THE SALE OF POISONS.

COMMENTING on the papers read on this subject at the Indian Medical Congress, the *Times of India* urges the necessity for insisting on measures restraining the procuring and sale of poisons, even though it may not be possible to check or censure Nature for so prolifically furnishing every hedge, field or garden in India with poisonous plants available to the homicide or suicide. He complains that the Bombay Poisons Act is far too insufficient, and while expressing surprise that Bengal is absolutely devoid of any law restricting the sale of deadly drugs, points out that, comparatively speaking, the suicides by poison were sixteen times as many for Calcutta alone, than for England and Wales combined.

TRACKING TYPHOID.

IN consequence of an outbreak of virulent typhoid in the 16th Queens' Lancets, MR. HANKIN made certain investigations which ran the typhoid bacilli to earth on the banks of a *nullah* where human dejecta, containing the bacillus, was pretty freely distributed. These bacilli, MR. HANKIN thinks were carried to the men's quarters either by the wind or by the milk and butter obtained from cows that habitually drank this *nullah-water* in preference to the clean water provided for them.

GOVERNMENT AS DISPENSER OF QUININE.

FOLLOWING up the example of Bengal, and the enormous success obtained in distributing genuine quinine cheaply to the poorer classes, the Bombay Government has, with the suggestions of Surgeon-General PINKERTON, resolved that the prisoners in Yerawda Central Jail shall put up Government quinine in five-grain packets, which will be sold by all the civil hospitals, dispensaries and post offices within the presidency at one pie (*i.e.*, three pices) per packet to the general public.

AN INDIAN DOCTOR FOR THE AMIR OF KABUL.

THE AMIR has asked the Indian Government for the services of a reliable native medical officer for Kabul. Khan Bahadur DR. RAHIM KHAN, Honorary Surgeon to the Viceroy, and a Professor of the Medical College, Lahore, of whom good reports have evidently reached Afghanistan, has, it is stated, been specially named by the AMIR; but it is doubtful whether DR. RAHIM KHAN will accept the AMIR's offer of appointment as his private physician, however tempting it may be. The Punjab Government in that case will probably send DR. AMIR SHAH, also of Lahore.

DR. FATEH CHAND

OUR worthy friend, DR. FATEH CHAND, of Lahore, still continues in the service of Government. We were led to believe he was retiring from the service and entering independent practice; but DR. FATEH CHAND writes to us to say he is unshaken of severing his connection with Government. There can be no question that DR. FATEH CHAND possesses rare abilities, and these can profitably be utilised by the State. We would therefore be glad to see him obtain a good appointment.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:

Jogendronath Ghosh, L.M.S., Teacher of Midwifery, Campbell Medical School, 46, Nebutolla Lane, Calcutta.

A. X. Dias, Asst. Surgeon, I. M. S., Station Hospital, Deolali.

C. M. D'Souza, Asst. Surgeon, I. M. S., Station Hospital, Deolali.

H. A. Lafond, Asst. Surgeon, I. M. S., Station Hospital, Deolali.

Geo. R. Chamarette, Asst. Surgeon, I. M. S., Station Hospital, Deolali.

George W. Beaumont, Asst. Surgeon, I. M. S., in medical charge G. I. P. Ry. Disp. and Civil Hospital, Bhussawal.

V. Chengalroya Moddellar, C.M.S., Hospital Assistant, Station Hospital, Bellary.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

SHORT ITEMS.

We have much pleasure in announcing the return of DR. D. N. CHATTERJEE to Calcutta, after five years' residence in Great Britain. He joined the University of Edinburgh, and after a successful career obtained the degrees of Bachelor of Medicine and Master of Surgery. DR. CHATTERJEE intends to practise in Calcutta, at 18 Bendon Street. We wish him every success.

The *Nursing Record* of London, which is rising rapidly in power, says:—"Our views remain that midwives, pure and simple, are an anachronism, that midwifery adopted as a speciality by thoroughly-trained nurses is a useful branch of their work, but that such workers must be registered as "Obstetric Nurses," not as practitioners of midwifery."

The Madras Government, at the instance of the Dewan of Cochin, has applied to the Secretary of State for the services of a suitable man to take up the appointment of Medical Officer to the Cochin Durbar, which will fall vacant in July next.

Newspapers in India have been roused to protest against some of their craft being subsidised by Government. They are memorialising Parliament against such flagrant injustice and corruption. Will the *Indian Medical Gazette* be included among the subsidised papers?

In the Punjab University the number of lectures required in each course of the following subjects is reduced from 100 to 70: Descriptive and Surgical Anatomy, Chemistry, General Anatomy and Physiology, Medicine and Surgery. This is a mistake.

The First Arts or Intermediate Examination in Arts, is now the preliminary test for candidates for medical diplomas in the Punjab University. This brings it in line with Calcutta, Bombay and Madras.

Lady Paget, the wife of Sir James Paget, Bart., M.D., died on the 7th January 1895, aged 60 years.

The preliminary educational tests for medical diplomas from the British Corporations and most of the British Universities are much inferior to the preliminary standard required for the diploma of an Indian university.

The Secretary of State having declined to grant an extension, it is now definitely settled that Dr. Bradshaw, P. M. O., Her Majesty's Forces in India, shortly retires from the service, and that Surgeon-Colonel Gore from Mhow succeeds him.

Here's another guess! The *British Medical Journal* says:—We understand that it is probable that Surgeon Major-General T. Walsh, P. M. O. Madras, will be the successor of Surgeon Major-General Bradshaw as P. M. O. of India.

Messrs. Smith, Stanistreet and Co., of Calcutta have notified the profession that they have received a stock of Behring's antitoxin for the cure of diphtheria. Also that they have an excellent shew of modern surgical instruments.

We are glad to notice that Dr. Kader Nath Sen, L.M.S., a medical practitioner of 20 years' standing, has removed to Calcutta. Dr. Sen enjoyed an extensive practice in Hooghly and Chinsurah.

Sir Richard James was the first Eurasian baronet. His mother was an Indian lady and his father Sir William James, Bart., was Chairman of the East India Company, and died 18th December 1788.

The Lady Reay Medical Scholarship, tenable for one year, has been awarded to Bachubai Mancher Datur, of the Empress High School for girls.

Assistant Surgeon William Forrester, I. M. S. (Bengal), has successfully passed the examinations and has obtained the diplomas of M. R. C. S. Eng. and L. R. C. P. London.

The Eurasian and Anglo-Indian Association of Madras has 1,272 members. What an object lesson for Calcutta and Bombay!

A testimonial to Sir Joseph Fayrer, M.D., is suggested. It will take the form of an oil painting of this famous old Indian hero. The limit of subscription for India is Rs. 10. Surgeon-Colonel Lane Notter, A. M. S., Netley, is treasurer.

Brigade Surgeon J. C. Whishaw, I. M. S., for many years Civil Surgeon of Lucknow, died at Mentone on the 20th January 1895 at the age of 62.

VITAL STATISTICS.

| PROVINCES AND TOWNS. | Population. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population per annum. | NUMBER OF DEATHS FROM | | | | |
|----------------------------|-------------|-------------------------------------------------------------------------------|----------------------|---------------|------------------------------------------|-----------------------|------------|--------|-------------------|-----|
| | | | | | | Cholera | Small-pox. | Fever. | Bowel Complaints. | |
| BENGAL.— | | | | | | | | | | |
| Urban Calcutta | 681,560 | { From 23rd Dec. '94 to 19th Jany. 1895. | ... | 1,422 | 39.7 | 112 | 96 | 584 | 164 | |
| Suburban " | ... | | ... | 822 | 49.8 | 63 | 6 | 338 | 176 | |
| Howrah " | 116,606 | | | | | | | | | |
| Fatna " | 165,192 | | Returns not received | | | | | | | |
| MADRAS.— | | | | | | | | | | |
| Madras | 452,518 | { From 15th Dec. '94 to 18th Jany. 1895. From 23rd Nov. to 28th Dec. 1894. | 1,517 | 1,675 | 38.4 | 84 | 0 | 596 | 206 | |
| Trichinopoly | 90,609 | | 170 | 214 | 24.5 | 7 | 0 | 86 | 32 | |
| Madura | 87,428 | | 269 | 254 | 30.2 | 47 | 0 | 39 | 26 | |
| BOMBAY.— | | | | | | | | | | |
| Bombay | 821,764 | { From 26th Dec. '94 to 29th Jany. 1895. | | 1,474 | 2,581 | 30.63 | 2 | 24 | 635 | 243 |
| N.-W. PROVINCES.— | | | | | | | | | | |
| Lucknow | 244,303 | { For December 1894. | ... | 948 | ... | 1 | 0 | 710 | 47 | |
| Benares | 213,168 | | ... | 782 | ... | 8 | 0 | 581 | 90 | |
| Cawnpur | 163,779 | | Returns not received | ... | Complete | ... | ... | ... | ... | |
| Allahabad | 162,895 | | ... | 366 | ... | 0 | 0 | 301 | 6 | |
| PUNJAB.— | | | | | | | | | | |
| Delhi | 189,648 | { From 25th Nov. to 29th Dec. 1894. | Returns not received | ... | Complete | ... | ... | ... | ... | |
| Mooltan | 64,265 | | 351 | 246 | 40.0 | 0 | 0 | 82 | 24 | |
| Lahore | 159,597 | | 618 | 536 | 35.0 | 0 | 0 | 353 | 27 | |
| Amritsar | 135,401 | | 601 | 974 | 62.4 | 0 | 0 | 666 | 48 | |
| Peshawar | 63,079 | | 221 | 264 | 43.6 | 0 | 8 | 172 | 18 | |
| ASSAM.— | | | | | | | | | | |
| Sylhet Dist. * | 2,154,593 | { For November 1894. | 8,061 | 6,183 | 34.44 | 51 | 57 | 2,885 | 604 | |
| Goalpara " | 452,304 | | 1,774 | 1,526 | 42.44 | 9 | 25 | 1,221 | 40 | |
| Kamrup " | 684,249 | | 1,864 | 1,588 | 40.00 | 280 | 0 | 1,006 | 46 | |
| Sibsagar " | 457,274 | | 1,389 | 1,537 | 40.32 | 164 | 8 | 658 | 232 | |
| CENTRAL PROVINCES.— | | | | | | | | | | |
| Nagpur | 117,014 | { From 2nd Dec. to 29th Dec. 1894. | 269 | 247 | ... | 0 | 8 | 153 | 16 | |
| Jubbulpur | 73,166 | | Returns not received | ... | Complete | ... | ... | ... | ... | |
| Saugor | 32,766 | | 82 | 106 | ... | 0 | 0 | 43 | 6 | |
| BURMA.— | | | | | | | | | | |
| Rangoon | 180,224 | { From 17th Nov. to 15th Dec. 1894. | Returns not received | ... | Complete | ... | ... | ... | ... | |
| Moulmèti | 55,785 | | | | | | | | | |

* There were 33, 2, 1 and 16 deaths from *Beri-beri*; and 1, 26, 177 and 0 deaths from *Kala-azar* in these four districts, respectively.

OUR LONDON LETTER.

(From our own Correspondent.)

FOLLOWING the even tenor of my correspondence, I may indicate the fact that foggy weather with snow is falling upon the "great metropolis." The thermometer during several nights has fallen below 32°F. Typhoid and diphtheria are still common in our midst. Our great hospitals are indeed busy. I visited St. Bartholomews yesterday and there was scarcely a bed to be had. The current medical literature is fairly teeming with reports of cases of that plague *diphtheria, treated by the new antitoxin serum*. BEHRING'S, ARONSON'S and ROUX'S being used.

The *British Medical Journal* publishes an admirable table of the cases treated by the several forms of antitoxin in vogue in France, Germany, &c., also successes obtained at Netley, St. Bartholomews and St. Mary's Hospitals.

Some of our leading physicians and surgeons are inviting subscriptions to raise a monument to late DR. BEAVER NAKE RAKE of Trinidad, who did such prominent work in connection with the Royal Commission of enquiry into Leprosy in India. Among the curiosities agitating the credulous and superstitious is the belief of miraculous cures at St. Winifred's Well. After this, and with pilgrims of Lourdes can we in sooth say that we have rent the veil from the alchemic science of the dark ages, for the plebs of England are still, we must admit, highly strung as to their imaginative faculties. The laity especially in Wales still believe in certain curious and wonder-working cures.

The Edinburgh University Court has at length determined to recognise the lecturers of the Edinburgh School of Medicine for Women and of the Edinburgh Medical College for Women as "lecturers especially appointed by the University." M. JEX BLAKE, M.D., is the leading spirit, as Dean of the School of Medicine in throwing open this splendid degree to her sex.

DR. WALTER DIXON, R.N., has passed away. He had a meritorious and eventful career. Becoming M.D. Edinburgh 1841, he served on the West Coast of Africa, in the Baltic, during the Indian mutiny, during the Russian war holding an important commission. He was Senior Medical Officer in the naval operations against China, 1859-60. Among his contributions to medical literature was the Medical History of H. M. S. Chesapeake in India and Arabia; this gained for him the Blaine gold medal.

London will soon be able to boast of a new medical society, which will be styled the New Clinical Society, to be organised by the staff of the North-West London Hospital. This may prove opportune, as the practitioners of North London have determined to turn their backs upon the consultant staff of the Great Northern Hospital since the opening of *pay wards* there. The immediate consequence of this determination will certainly mean the resignation of ~~members~~ of the members of the North London Medical-Chirurgical Society.

A new general order to effect re-organisation of the I. M. S. threatens to bring about some changes in the Indian service of a startling character, is practically settled, and the order will doubtless be shortly published and will make alterations among military

men too. There is a vacancy among the staff of the Westminster Hospital. Their urbane senior physician, OCTAVIUS STURGES, M.D., F.R.C.P. London, while crossing Cavendish Square was knocked down by a cab and received injuries which terminated fatally. The reason of this accident happening, was owing to slight deafness from which the deceased suffered, precluded his hearing the approaching vehicle, the wheels of it being protected by India rubber tyres. The kindly face well liked by all has left us, and the students in the wards no longer hear his genial tones. DR. STURGES was born in London 1833, went to Addiscombe as a cadet in East India Company's service, thence he passed out to India as a Lieutenant, Bombay Artillery, after 5 years returned to London and entered as a student at St. George's Hospital, becoming Medical Registrar 1863, and also entered at Emmanuel College, Cambridge, B. A. and M. B. 1862, M. R. C. P. 1863. In 1867 M. D. Cantab. 1870. F. R. C. P. London. Assistant Physician, Westminster Hospital 1868. He became successively Lecturer in Forensic Medicine till 1871, when he lectured on Materia Medica. In 1874 he succeeded DR. ANSTREY in the chair of medicine, which he resigned only last year; elected physician 1875; till his death, physician to Great Ormond Hospital for sick Children. His literary work included "Chorea" and that on "Pneumonia." These are vivid pictures of the diseases most clear and striking in their style. His disposition was peaceable, and his humour was most kindly. He was a delightful companion, widely read and discriminative.

Ipecacuanha tabloids keratin coated have just been manufactured and can be obtained from Messrs. Burroughs Wellcome and Co., London. *These elegantly made and coated tabloids are therapeutically and pharmaceutically a great advance upon the Pulvis Ipecacuanha Co. of the B. P., which was regarded at one time almost as a specific in endemic and epidemic dysentery.* The use of ipecacuanha tabloids in the treatment of dysentery, with the additional use of enemata of haseline in warm water solution is now a recognised and valuable method.

A meeting was held at the Holborn Restaurant for the purpose of initiating a society composed of surgeons engaged in *orthopaedic work*, MR. NOBLE SMITH being in the chair. This body is to be styled "The British Orthopaedic Society," established to advance the study of orthopaedics.

There have been several prosecutions under the Apothecaries' Act. An action has been brought by a groom against DR. T. O'BRIEN to the extent of £1,000; the plaintiff alleging that he had sustained loss and injuries due to negligence of his medical attendant. The jury found a verdict for the plaintiff and allowed £175 damages.

The President, R. C. S. I., disapproves of the policy of his associates on the General Medical Council in agreeing to an additional year of study and raising the standard of examination which he earnestly condemns. This Council has been again in session for 9 days under the presidency of SIR RICHARD QUAIN, Bart. This is their 57th session, the object of which is to encourage reforms and abolish abuses, in other words, purge the chaff from the profession. The first subject attacked was the revision of the final examination of Glasgow University, which were deemed

satisfactory, when explained and this opinion was carried on the motion of Sir DYCE DUCKWORTH.

The examinations of the Aberdeen University were deemed sufficient. Reports were handed in on examinations in public health in the Universities of Edinburgh, Cambridge and Durham. The Certificates of midwives were discussed in camera. Thirty-four penal cases were gone through. The five years' curriculum led to a warm debate as to changes in schedule, &c.

A new pharmacopœia came under consideration. The Council also complained of the *Lancet* publishing a report prematurely, and some members of the Council were for censuring the proceeding of that "energetic reformer," which perhaps rightly seems to think that such matters should be treated of "*coram publico medico*." Some resolutions were then passed as to the regular mode of procedure to have a name, when once erased from the Register, replaced thereon.

A lecture was given by Dr. SIMS WOODHEAD under the auspices of the British Institute of Public Health on "*The diagnosis and antitoxic serum treatment of diphtheria*." There has been a new society, formed in London consisting of members R. C. S. England. Drs. RUSSELL, REYNOLDS, HERMAN WEBER, POWELL, R. DOUGLAS, and CHEDIAK have been elected consulting physicians of the Royal National Hospital for consumption.

The death is announced of Deputy Surgeon-General E. H. ROBERTS, who retired in 1888. He had served in the Crimea, being present at the siege and fall of Sebastopol and throughout the Indian Mutiny (1857-58) he was on duty at the siege and capture of Lucknow.

The London Building Act will shortly be debated in all its aspects at a meeting of the Sanitary Institute. War is being waged strongly by the Medical Practitioners' Association on the introduction of *pay wards* at the Great Northern Hospital.

Dr. FRANCIS BISSSETT HAWKINS, who was the oldest graduate of Oxford University, has died at the venerable age of 98 years. Fifty years ago, he was perhaps one of the most distinguished graduates of that time, of his honored *alma mater*, and one of the most prominent Fellows of the R. C. P., London. *Sic transit gloria mundi!*

Mr. T. HOLMES, F.R.C.S., has been elected Treasurer of St. George's Hospitals, being a consultive surgeon of that institution already. Dr. DEHAVILLAND HALL has, after devoting 19 years to the out-patients, been appointed physician, *vice* Dr. O. Sturges, lately deceased.

In connection with the *Westminster Hospital* it has been determined to raise a memorial to Dr. STARGES their deceased senior physician. Dr. HUGHLINGS JACKSON has retired from the active staff of the London Hospital, and the students desire to commemorate the retirement of such a distinguished neurologist. PROFESSOR W. R. SMITH, M.D., F.R.S.E., D.Sc. barrister-at-law, Professor and Forensic Director of the Laboratories of State Medicine, Medical Officer of the Schoolboard for London and Manager of Metropolitan Asylums Board was presented with a service of plate by the Lord Mayor, acting for the Fellows and Members and Associates of the British Institute of Public Health.

The latest development of "*the fever theory*" emanates from Bucharest from the mouth of PROFESSOR DEMOTHENIS, who advises gravely the use of a metal purse capable of ready sterilisation, by those who receive fees at the bedside, and the routine washing of the hands before leaving the patient's room, but a medical contemporary stigmatises this "hyperantisepticism" as a sort of transcendentalism. *Drug adulterations* of the most grandlun character is a trade extensively carried on, aye and patronised too. Twelve prosecutions were recorded by the Pharmaceutical Society. *Seropathy* still marches progressively onwards. Weekly notices occur in the journals, of diphtheria cases treated successfully by anti-diphtheritic serum. The patients of the different London hospitals, especially the children, have been having a joyous time. Special food was provided. Spirits, wines and tobacco being distributed to not a few. The medical and nursing staff being energetic and successful in decorating the wards and providing heaps of toys for the sick children. Their friends, too, had special permission to visit them in the course of the afternoon.

The report of the Chief Commissioner of Police shews that the rapid increase of London during 1894 was due to the following items; no less than 12,633 new houses were built and 100 new streets completed. He also shews the number killed in the streets during the year amounted to 1,601 persons, and 6,336 injured. Startling intelligence has just reached me that, during the great gale which swept over England on the night of December 23rd last, the children's ward in Blackburn Infirmary collapsed, burying 7 of its inmates in the ruins. All the children escaped with their lives, but some were badly injured.

At a meeting of the Hunterian Society, Dr. ARTHUR DAVIES raised a discussion on *Skin Diseases treated by thyroid feeding*. He said that the tabloids he used equalled $\frac{1}{2}$ of a gland, and that very small doses produced appreciable symptoms in myxodematous or neurotic patients. He further demonstrated by lantern slides, various cases of *psoriasis*, &c., before and after the treatment by thyroid gland tissue. Dr. P. S. ABRAHAM exhibited his third case of *lupus vulgaris* treated by thyroid tabloids. He had tried the remedy in 2 cases of *leprosy* with some benefit. In one case the disease became stationary for a period of 12 months. Dr. BEAVER RAKE had tried tabloids in 5 cases at the Leper Asylum at Trinidad, but his supply of these agents was inadequate, and the disease was of years standing—result negative. He mentioned the case of a female subject to *alopecia areata*, in which administration of thyroid gland had caused a general sprouting of hair over scalp, eyebrows and elsewhere.

Dr. BRUNNER of Zurich has contributed an interesting monograph on the history of military surgery and hygiene among the ancient Romans. Dr. KLEIN, F.R.S., at a meeting of the Clinical Society, took as the subject of a discourse "The relations of bacteria to their toxins." Drs. WASHBOURN and GODDALL have brought forward details of eighty cases of diphtheria, proved by bacteriological diagnosis, treated with good results by "anti-diphtheritic serum" subcutaneously injected.

Accident sometimes happen through playing with even toy firearms. A young lady, residing in the suburb of Clapham, met her death through discharging at herself a toy

pistol which chanced to be loaded. The attention of our legislators should be called to the dangers of keeping loaded weapons lying about the premises. All such lethal instruments should be kept under lock and key, and children never, under any circumstances, allowed access to them.

Rabies has broken out in Leeds, and the parochial authorities have made the magnificent offer to policemen, who are to receive 3d. per head of each suspicious dog captured, risking life, so to speak, for about half a pint of ale! Generous, is it not? It is to be hoped, under the circumstances, that should a constable spy a suspicious looking member of the canine family, he will dart away in the opposite direction.

DR. MASON has published his report on the 1893 cholera outbreak in Hull. He details 17 cases with 12 deaths (a mortality rate of 70 per cent). He seems to regard it as a recrudescence of the 1892 attack. Cases of over-work and sweating in laundries are reported. Death provoking the attention of the authorities to the subject as usual.

DR. HERMANN WEBER has handed over to the R. C. P. London a sum of money to provide a WEBER medal and prize for research on the subject of tuberculosis.

A dentist has successfully sued a lady patient for the sum of £23 for the supply of dentures and visits, claiming solely on the ground of professional skill.

The *Britannia* takes out the undermentioned surgeons for service in India:—Surgeon Lieutenant-Colonel DREW, Surgeon-Captain MORGAN and Surgeon-Lieutenant MACDERMOTT. Surgeon-Captain A. R. ALDRIDGE has reported himself at Netley for duty. Surgeon-Lieutenant MOORE, Netley, is under orders for India shortly.

Dermatology has reached in our day the standard of a special branch. It is practised now by some of our most eminent physicians and surgeons. Therefore to offer a few words on one of the most active dermatological remedies will not be deemed out of place in this fortnightly correspondence. The drug we present for remark is *Ichthyol* (this is a sulpho-ichthyolate of ammonium) and like all sulphur derivatives is lethal to various micro-organisms.

MALCOLM MORRIS, in his work on "Diseases of the Skin" states that this drug is perhaps more effective than any other, in the reduction of hyperæmia. It destroys the vitality of streptococci in erysipelas. The *Practitioner* confirms its utility in pruritus, erysipelas and dermatitis.

OCHSEN, *Medical Times*, March 4th 1893, advises its use in a common complaint—"sore nipples"—JUEL RENOY and HALLOPEAN advises it as a paint in erysipelas. SCHROIMMER indicates it in all skin complaints with cutaneous hyperæmia. It is feasible that a 10 per cent. solution should be painted over small-pox pustules. DR. SHEWALL THOMAS gives additional confirmation as to its immense value in erysipelas. FREUND and others give a high estimate of its therapeutic utility in inflammatory affections of the female genitals, stating that it is an anodyne and absorbent. Metritis of long standing can be cured, says DR. E. TURNER, by giving 3 tablets of ichthyol (B. W. & Co.) per diem. The *British Medical Journal* reports cases of exfoliative dermatitis, psoriasis, ichthyosis, acne vulgaris and voraces in which ichthyol proved most serviceable. DR. CHATELAIN used ichthyol with good effect in leprosy. Neuralgic pains with inflammation may be relieved

by subcutaneous injections of this drug, (*Edinburgh Medical Journal*). In *The Lancet* MR. J. K. TOMORY relates the cure of a female patient who had suffered from eczema for 3 years, was cured in about a month by the outward application of ichthyol. The eruption affected the back of the neck and scalp. This remedy was introduced by DR. G. P. UNNA (Hamburg) who first brought it under the notice of the profession in 1883 as a topical application in skin diseases with capillary congestion. Later on it was used extensively in gonorrhœa and uterine complaints. DR. CRANSTOWN CHARLES corroborated fully DR. UNNA'S views, and remarked that it acted by abstracting oxygen from the tissues. Its dose internally varies from 2½ to 10 grains, preferably given in tablets.

We have collected notes of about 1,850 cases of diphtheria treated with "Anti-diphtheritic Serum" injections. The mortality of these cases varies from 5 per cent to that of 24.33 in ROUX'S (448) cases. Some German observers have a mortality of 28 per cent in England. In DR. WASHBURN'S series of 72 cases of diphtheria (diagnosed bacteriologically) there was a mortality of 19.4 per cent.

Current Medical Literature.

MEDICINE.

Malarial Parasites in America.

OSLEN distinguishes three varieties of the malarial parasite: (1) the tertian, (2) the quartan, and (3) the æstivo-autumnal. The first requiring 48 hours' complete development is associated with relatively regular tertian paroxysms, lasting 10 to 12 hours and exhibiting the three classical stages of chill, fever and sweating; but infection by two groups of tertian organisms may give rise to quotidian paroxysms and by multiple groups to more irregular subcontinuous fever. The second, though rather rare, develops in about 72 hours, being associated with a fever showing regular quartan paroxysms, and infection with 2 groups produces fever on two days with intermission on the third, but infection by the groups of the parasite produce daily paroxysms. The third developing in from 24 to 48 hours or more has the spleen bone marrow and internal organs for its main seat of infection, and is associated with fevers that may be quotidian tertian, intermittent or continuous, with irregular remissions and irregular variations of temperature; but the individual paroxysms last about 24 hours. Quinine, which exerts its influence most strongly when the parasite is undergoing segmentation just prior to entering into new red corpuscles. Its action is much more rapid and certain with the tertian and quartan than the æstivo-autumnal infection; but to be of any use it must be given just before the beginning of a spasm.

Dietetic treatment of Diabetes Mellitus.

WILLIAMSON, who deprecates gluten on the score of expense, ureliability, and intolerance, advocates strongly in favor of HONDHAUSEN'S *aleuronant*, which is a cheap form of vegetable albumen, prepared from wheat and capable of substituting flour for soups, sauces, &c., as also of being baked as bread by the addition to it of an equal bulk of wheat flour. PAVY recommends almond cakes as a substitute for bread. The sugar being dissolved out and a mass free from carbohydrate obtained by washing the almond meal with boiling acidified water; but this substance is not only expensive, but it is also difficult of digestion by virtue of the oil and fat it contains, *Sundby Nielsen*, which is the soluble gelatinous substance contained in Icelandic moss (*Odieria*) after deprivation of its bitter principle—a capital food but unfortunately one that only wealthy patients can afford.

The Etiology of Paludism.

SINCE the discovery by DR. LAVERAN of hæmatozoal parasites in the blood of malarial fever patients, numerous observers have given testimony to the existence of these parasites (*Plasmodium malarium*) in every case of paludal fever, but though these parasites assume such a number of forms as to lend to the impression of belonging to several distinct species and prompt some observers into trying to classify them, LAVERAN has proved to the hilt that while the same form of parasite may be observed in intermittent and in regular fevers, the same fever often presents several distinct forms (not species) of hæmatozoa in the blood, and the fact that in every part of the world malarial fevers readily yield to quinine, coupled with the marked effect of antiperiodic treatment on the blood, tend to confirm the opinion that instead of belonging to a plurality of species the different forms of *plasmodium malarium* mark the stages of the development of the same parasite under different climatic influences and morbid conditions of the blood.

Ricketts as an Infectious Disease.

PAUROT's syphilitic theory having fallen to the ground, because malnutrition rather leads to athrepsia and marasmus than to rickets, which can scarcely be due to defective assimilation of calcium phosphate under digestive disturbances, and as no proof is forthcoming to the theory that attributes rickets to the dissolution of the lime salts of the bones by excessive secretion of lactic acid in the stomach as the result of diarrhoea and digestive disorders, CHAUMIER propounded the theory that rickets is "a specific disease produced by an unknown microbe." The epidemic at Indre-et-Loire and the observations of BAGINSKY, BONADEL, CHAUMIER and HENOCCH lead to the conclusion that rickets is also a contagious disease. FEDER thinks that the microbial theory is just as good as any other, since nothing is positively known of the pathogeny of rickets, and PUECH asks whether it is safe to conclude that rickets is an "infectious, parasitic or a specific disease, the microbe of which produces only rickets."

A Peculiar Case of so-called Neuritis.

A FEMALE æt. 21, who four years previously had severe darting pains in the hands and forearms, subsiding into wasting and loss of power, consulted DR. HAROLD N. MOYER for the following symptoms:—Fibillary tremors; intense but symmetrical atrophy of hypothenar and thenar eminences, interosseous muscles and both forearms below the elbow sensibility to all forms of stimulation was diminished or lost as high as the middle third of left arm, and extending up to the shoulder and a portion of the anterior thorax on right side; exaggerated knee-jerk and ankle clonus of both sides; very irregular faradaic and electrical responses; nystagmus; vision good and fundi unaltered. DR. MOYER diagnosed this case as an anomalous one of peripheral neuritis; but the *Lancet* thinks it was a central disease of the cord involving both the anterior cornua and the white matter, and producing descending degeneration in the pyramidal tracts.

Typhoid Fever and Oyster-eating.

SEVERAL of the Middletown Co. University students having been seized by typhoid fever after one of the initiation suppers, DR. H. W. COX made a patient enquiry which traced the disease home to some oysters fished from the deep water of Long Island Sound and then deposited to "fatten" at the mouth of a fresh-water stream, close by a private sewer belonging to a house, wherein a lady and her daughter had, a few days previously, been laid up with typhoid fever, the germs of which had passed with the dejecta into the stream where these oysters were fattening.

Pernicious Anæmia at 21.

As it is not often that a case of pernicious anæmia is seen during the first 25 years of life, DR. W. E. GOWANS mentions a case where a young man of 21 was brought to him with numerous flame-shaped hæmorrhages in his retina, scopic, short-winded, cadaveric countenance and very pale gums and conjunctivæ, while the percentage of red-blood corpuscles was barely 25; the hæmoglobin had sunk to a trifle over 30 per cent., and other symptoms of bad chlorosis. In spite of careful treatment, he steadily failed, and his temperature rose for a few days. Pyrexia returned on the 30th day, when a large hæmorrhage occurred in the right eye and vomiting setting in, the patient died two days later.

SURGERY.

Stomach-recting.

THIS operation has been performed by DR. BRANDT for dilatation of the stomach. It is well known that the stomach becomes enlarged in cases of pyloric stenosis due to new growth, cicatricial contraction, or bands of adhesions. The rational treatment of this stomach trouble is the removal of the cause. This is accomplished by pylorus resection and excision of pyloric cicatrices, which have been so successfully done during the past few years. It sometimes happens, however, that after opening the abdomen no such cause is found for the dilatation. If the wound is closed, the laparotomy has been nothing more than an explorative operation, and the patient continues to suffer from the disease; the case being then regarded as a medical one, and a subject for medical treatment. It has occurred to BRANDT to treat these idiopathic cases by diminishing the size of the stomach by folding in its wall and suturing it through the serosa and muscularis. The patient upon whom he operated was a woman, twenty-six years of age. The gastric sound could be introduced till it struck the pubes and left POUPART'S ligament. Palpation revealed no tumor of the pyloric or other region, nor even an abnormal resistance. The patient was poorly nourished and greatly reduced in strength. She was treated medically by faradisation and lavage of the stomach, with little improvement. After this treatment had been carried on for two months, BRANDT made an opening into the abdomen parallel with the left costal arch, and explored the stomach and other abdominal contents. Pylorus was especially examined, and nothing found. The organ was found enormously enlarged. He then proceeded to fold in the anterior wall and suture it by two rows of transverse sutures. The same was done on the posterior wall through holes torn through the great omentum. More than two hundred sutures were applied. The patient made an excellent recovery, without any disturbance of digestion, and was able to leave her bed on the tenth day. BRANDT has published this case as preliminary to a more exhaustive communication upon the subject. The same operation has been described under the head of "gastrople" in the same periodical.—*Annals of Surgery*.

Contagious Eye Diseases and Preventible Blindness: their Etiology and Prevention.

COMMENTING on the statement of the United States Census bureau, that of a total population of 62,624,350 souls 50,568 were blind, DR. J. MONROE RAY thinks that a good deal of this blindness could have been prevented by making general the New York State law that heavily punishes the midwife or nurse who neglects to report redness of eye or both eyes that appears in any infant within two weeks of its birth. In his opinion contagion and highly acrimonious results

are threatened in every case where inflamed conjunctiva are accompanied by the formation of a secretion. Under this category he brings ophthalmia neonatorum, trachoma or granular lids and gonorrhoeal ophthalmia; but he particularly emphasises ophthalmia neonatorum, which he thinks can be readily prevented by (a) controlling vaginal discharges during pregnancy, (b) thoroughly cleansing the vagina before delivery, and (c) by the moment delivery is over clean the child's eyes with a fluid that will either remove the injurious material or destroy its action. His method of dealing with the last set was to first wash the new born babe in the usual way and then after cleaning the eyelids with a pledget of cotton and clean water to allow to drop *one* drop of 2 per cent nitrate of silver solution. No ill results followed, but there was a great reduction in the percentage of blind persons.

The advantage of internal Urethrotomy over Forcible Dilatation.

CANTALUPO advocates internal urethrotomy in hard strictures where a dilator cannot be introduced, or, if introduced, cannot be opened (in which case he uses MAISONNEUVE'S urethrotome). The wound in internal urethrotomy is much less extensive than in forcible dilatation, and the dilatability of the stricture is much greater after urethrotomy than after division. The chief dangers are:—(1) Hæmorrhage; this may be avoided by using small-bladed instruments—for example, BOTTINI'S. (2) Extravasation of urine; best avoided by retaining a catheter of less calibre than the divided stricture, and using some drainage tube as a siphon. (3) Pyæmia may be excluded by antiseptic measures. (4) Fever, generally due to local retention of pus. CANTALUPO finds a fresh indication for internal urethrotomy in cases of chronic gleet with stricture, where after dilating the stricture up to a certain point, it still cannot be dilated up to the calibre of the sound part of the urethra.

Successful Splenectomy.

As a consequence of influenza and intense mental worry over monetary troubles, a female had a paralytic stroke from which she recovered, but the spleen beginning to enlarge and cause her a great deal of misery, she was admitted into the Sunderland Infirmary, where DR. JAMES MURPHY operated on her, removing a spleen 8.75 inches long, 9.13 inches superior and 10 inches lower circumference and weighing 1.5 lb. It was firmly adherent to the omentum and to two or three portions of the transverse colon. The adhesions being rapidly broken down and the pedicle secured by silk ligatures the spleen was extirpated and the abdominal wound closed. The hæmorrhage was excessive, but the woman rallied, and though convalescence was a little dilatory she was in 48 days after operation discharged from hospital quite free from pain. She has since put on flesh and appears to not suffer any inconvenience from the extirpation of her spleen.

Lactic Acid in Corneal Ulcers.

To prove MOSETH VON MOOREHOFF'S contention that lactic acid acted on diseased tissues but left healthy parts unaffected, DOLEZHOFF touched corneal ulcers of various stages and sizes with a thin piece of wood dipped in a fifty per cent solution of lactic acid. He was so well satisfied with the results obtained that he tried it in chronic trachomatous ulcers complicated with photophobia and dilated vessels of the eye. A single application of the lactic acid sufficed to arrest further progress of the ulcer by forming an eschar which, falling off in 3 or 4 days, left healthy cornea underneath. In those cases where the healthy portions of the cornea were accidentally touched the epithelium only was damaged and the spot completely healed by the following day.

Sarcoma of the Testis stimulating Hæmatocele.

THE tendency to hæmorrhage in the softer forms of malignant growth often render extremely difficult, even by exploratory puncture, a correct differential diagnosis of hæmatocele and malignant growth of the testicle. A man aged 38 came to DR. C. A. MORTON with a rapidly increasing swelling exhibiting the symptoms of hæmatocele which the exploratory puncture appeared to confirm; but on cutting open the swelling it was found to consist of very soft friable sarcoma enclosed within a greatly thickened tunica albuginea and in the centre of this mass was a cavity containing decolorised blood-clot, a portion of which must have escaped through the exploring cannula and given rise to the collection of brown fluid like hæmatocele fluid.

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OBSTETRICS AND GYNÆCOLOGY.

Vaginal Hysterectomy.

AFTER rendering her vagina and genitals aseptic and placing the patient in the lithotomy position with her buttocks on a hard pillow and the perineum and posterior vaginal wall drawn down by a SIMON'S speculum, DR. A. J. MCCOSH curescutes or scrapes the cauliflower growths off the cervix, scrubs the ulcerated surface with a 1 per mille bichloride solution and applies the Paquelin cautery. Dragging the uterus downwards with a vulsellum he dissects the cervix away from the bladder and anterior vaginal wall—the incision being 0.5 inch away from the edge of the neoplasm—and carries the dissection laterally as far as the broad ligaments and up to but without wounding the peritoneum. Then separating the posterior vaginal wall and controlling bleeding by a running catgut suture, close to the vaginal edge, he makes a free incision through the peritoneum into DOUGLAS'S pouch, ligates the lower ends of the broad ligaments, which he severs from the uterus and after similarly ligating and cutting away the next portion of the ligaments he freely opens the peritoneal cavity over the anterior aspect of the fundus and removes the uterus bodily. Bleeding points attended to the tubes, ovaries and adnexa are carefully examined and, if they are healthy and have no downward tendency, they are not disturbed; but if they appear infiltrated with inflammatory or other material or fall into the opening, they are excised together with as much as possible of the ligaments. The peritoneum having been sutured to the cut edges of the vagina and the ligaments gently drawn downwards, a roll of iodoform gauze is passed up to, but not within, the peritoneal cavity, and a sterilised gauze pad placed over the vulva. This pad may be changed as often as necessary, but the roll must not be removed till the fifth or sixth day, when the vagina should be gently irrigated. The patients are generally out of bed by the fourteenth day.

Version three weeks before Delivery.

DR. G. STARKER contends that version can be much easier performed before labor sets in than it can after uterine expulsive efforts have begun, when the uterus resents manipulation by gripping the fœtus more firmly necessitating anaesthetics and the risks of lacerating uterine and fetal tissues. He therefore conjures medical men to examine pregnant patients a week or two before their expected confinement, so as to ascertain and correct presentations, and in illustration of this advice he submits a case where in the inside of ten minutes, and three weeks before labor set in he performed version by external manipulation alone in a multipara, who labored severely at each previous confinement, which was a breech presentation; but after this manipulation she was brought to bed in three weeks' time when the

head presenting in the L. O. A. position the entire labor lasted for 95 minutes, and she was delivered of a girl baby. Her progress since then has been uneventful.

Rules for the Introduction of Instruments into the Uterus.

DR. C. S. BACON says:—

1. Do not expect to complete the preparation of the patient with less than fifteen minutes of hard work.
2. Never make the examination at the first visit of the patient. Instruct her how to take a vaginal douche, and direct her to use sublimate douches twice a day for three or four days. If immediate examination is required, let it be done at her home or in a hospital with all the preparatory details of a surgical operation.
3. Thoroughly disinfect the external genitals and surrounding skin.
4. Disinfect the hands and instruments, including the irrigating tip, which should be a glass tube.
5. Wash the vagina with a solution of lysol or creolin. In the office I have found TOOKER'S bedpan most useful. A liquid soap, like LEE'S or JOHNSON'S, is quite necessary. With two fingers, either with or without sterilised gauze or cotton, thoroughly scrub every part of the vaginal wall.
6. Introduce a NEUGEBAUER speculum, which is better than any form of CUSCO'S bivalve; for it is asepticizable, and better than a cylindrical speculum, for it is much easier to work through.
7. Disinfect the cervical canal by means of a cotton swab, using first the liquid soap, then strong creolin solution, and finally alcohol. Never introduce an instrument without seeing the cervical canal.

I believe that the carrying out of these rules will prevent all except post-partum, post-abortion and gonorrhoeal endometritis and salpingitis.—*American Jour. of Obstetrics.*

The Importance of Menstruation in Determining Mental Irresponsibility.

KRAFFT-ENING reaches the following conclusions on the subject:—

1. It is useful to consider the mental soundness of women during menstruation from a medico-legal point of view.
2. It is advisable where a woman is held on a criminal charge to ascertain whether the commission of the act coincided with the menstrual period; and by "period" is meant not only the days when there is actual flowing, but those before and after as well.
3. It is best to advise examination of the mental condition when such coincidence is established. This is indispensable when there is a personal history of neuropathic defect of mental disturbance at the time of previous menstrual periods, or when the nature of the act reveals any striking features.
4. When the menstrual process exerts a powerful influence on the mental life of the subject, the accused should be given the benefit of extenuating circumstances in the infliction of the penalty, even although there be no proof of menstrual insanity.
5. When the offence of crime has, in a person whose mind is impaired, occurred during the menstrual period, she must be declared irresponsible, for there is every reason to think the act is due to emotional impulse.
6. But individuals, who by reason of menstrual insanity, would benefit by acquittal on this ground should be considered as dangerous in the extreme and subjected during the times of the menses to close surveillance. It is best to confine them to any asylum for the insane where they will be comfortably cared for and often cured of this menstrual instability of mind.—*Brooklyn Med. Jour.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Infective Embryonal Pathology.

THE questions to be decided were:—

1. Has embryonal tissue in contact with a certain virus the same strength of resistance as the tissue of an adult?
2. What becomes of the micro-organisms which pass through the placenta and come in contact with the tissues of the embryo?
3. Does the egg not receive the bacilli with the spermatozoid, or are the tissues of the embryo resistant to the development of the bacillus?

The investigation of this subject was undertaken by MAFFUCCI. He inoculated hen's eggs with seven different kinds of microbes and studied them under different brood periods. Under the same conditions, i.e., at different periods of the brood period, he also inoculated the albumen which encloses the embryo. The fecundated and bred albumen is very favorable to the development of a certain series of pathogenic micro-organisms, but the non-bred albumen does not possess this power. The microbes inoculated were:—Anthrax bacilli, spores of cholera of fowls, pneumococcus of Friedlander, fowl tuberculosis, Tuberculosis of mammalia, toxic products of fowl tuberculosis, toxic products of mammalian tuberculosis.

The liver was the most interesting of the organs of the embryo.

By the 10th day the inoculated microbes from the albumen surrounding the embryo penetrate to the tissues of the embryo itself. These infected embryos MAFFUCCI further studied in order to observe in what manner the microbes absorbed in embryonal life would behave in the life out of the egg. The following results were obtained:—

- (1). The albumen fecundated and brooded, taken from the eggs at different brood periods, is a favorable medium for the growth of the above-named microbes; but the same albumen does not induce the growth of these microbes in the living embryo.
- (2). The microbes in the tissues of the living embryo do not multiply.
- (3). Microbes in the tissues of the embryo, which kill the control animal, do not affect the embryo.
- (4). The microbes can be destroyed or attenuated in the tissues of the embryo, but not in the surrounding albumen.
- (5). When the embryo has destroyed the bacillus of the fowl tuberculosis, it is born marmite, and with this form, after a long time, can die without tuberculosis in the organs.
- (6). The same effect of marmite can be obtained by inoculating into the eggs dead bacilli of the fowl tuberculosis.
- (7). The destruction of the virus by the embryo does not render it refractory against the same infection when inoculated later on. In this instance a long time after hatching (fowl cholera).
- (8). Whilst all these changes happen in the tissues of the embryo, the rest of the microbes remaining in the albumen retain their pathogenic power.
- (9). The attenuation of the virus (fowl cholera) appears on the 18th day of the brooding time.

MAFFUCCI next studied the reaction in the embryo of the rabbit with the virus of tuberculosis.

He inoculated buck coneys by the jugular vein, with tuberculosis and examined the semen. From the 25th day to 3 months after, numbers of bacilli were found—and coneys inoculated with this semen became tuberculous. The rabbits born from tuberculous mothers do not present tubercles until the 6th month after their birth, but after this time, they can contain tubercles in the liver and lungs, but without bacilli visible to us. The liver is the great protector from infection, and the living embryo can destroy, attenuate, or communicate pathogenic microbes and develop them later in life.

The Liver and its Glycogenic Function.

DR. PAVY has recently made some rather radical statements regarding the functions of the liver in its relation to sugar and to the pathology of diabetes.

This distinguished investigator asserts that there is no increase of sugar in the blood leaving the liver, that glycogen is not converted into sugar, that sugar does not disappear in the circulation, and that it is all excreted by the liver. The liver in fine has no more to do with sugar than other tissues, and not so much perhaps as the muscles.

DR. D. NOEL PATON, however, in an article on the "Physiology of the Carbohydrates" denies seriatim these views of PAVY, and says that not one of them is proven. "The evidence for the constant production of sugar in the liver," he says "the evidence that glycogen is a source of sugar, the evidence that sugar disappears in the general circulation (I do not say is used in the tissues), is overwhelming, and thus the glycogenic theory of BERNARD holds its ground unshaken."

DR. PATON further asserts that one of the great functions of the liver is to produce sugar will not, at the present time, be denied by any physiologist. The theory of PAVY, repeated in nearly every text-book, that the liver is a sugar-destroying and not a sugar-forming organ, rests on so unsubstantial a basis, and has been so completely refuted by the work of SEEGEN and other investigators, that it need not be considered.

When experts disagree, it is difficult for those who are not in possession of special physiological knowledge to decide. We trust, however, that the truth will soon be reached, for there are few questions of more practical interest than that of the physiological chemistry of sugar.—*Edin. Med. Jour.*

Physio-Pathology of Chlorosis.

MURRI thinks that most children who appear nothing more than a little anemic are potentially chlorotic, and that when abnormal stimulation of the utero-ovarian functions occurs at the onset of puberty, leads to defective nutrition of the red corpuscles, unstable intravascular pressure and other disturbances in the normal blood distribution. Chlorosis manifests itself, and this same may occur, whenever any other psychical stimuli produce results similar to the above. Cold, fatigue, agitation, suppression of menses, &c., may either provoke or aggravate chlorosis in potentially chlorotic subjects, whose central vasomotor nerve systems being notably unstable and any disturbance of such centre must lead to faulty blood distribution.

Anæmia with Cord changes.

A PATIENT, aged 50, suffering with great anæmia, weakness, headache and poverty of hæmoglobin in her blood, was placed by DR. H. M. BOWMAN under arsenic treatment on which she made a rapid recovery; but some months later she relapsed; and, despite the best of treatment, her conditions became gradually worse, the anæmia rapidly increased, sensibility and motive power began to get lost, and the lower extremities paralysed. Ankle-clonus developed, there was incontinence of urine and feces, with occasional troublesome vomiting. Towards the end numerous retinal hæmorrhages were visible, and in six months after the onset of this second illness (or relapse) the patient died. Besides the anæmic state of the various organs the necropsy disclosed an inflammatory cyst running from the head of the pancreas to the duodenum, and the spinal-cord was found to have extensive scleroses most marked in the posterior columns, but present also in the lateral and in the anterior, and wherever the sclerosis was most marked the arterial walls were greatly thickened.

Anatomical Changes in Diphtheritic Paralysis.

DURING convalescence from diphtheria, a male patient, *æt.* 40, exhibited nasal speech, difficulty in swallowing, paresis of lower limbs, ataxy, paræsthesia and loss of knee-jerk. Later on sensory impairment and ataxy of upper extremities occurring—electrical responses normal—respiratory paralysis, carried the man off four weeks after onset of nervous symptoms. The autopsy shewing no changes in the peripheral nerves, but a good deal of degeneration of the root fibres of the cord, especially in the dorsal region, in the root zone of the posterior columns, and in the posterior portion of the lateral columns. DR. BIKELES think these changes similar to those occurring in ergotism and pernicious anæmia, and believes that the resemblance of post-diphtheritic ataxy to tabes is explained by the fact that the posterior roots were affected especially in their intermedullary fibres.

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PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The American President on the subject of a National Health Society.

PRESIDENT CLEVELAND'S message makes the following recommendation to Congress concerning a Public Health Establishment:—

"I am entirely convinced that we ought not to be longer without a National Board of Health or National Health Officer charged with no other duties than such as pertain to the protection of our country from the invasion of pestilence and disease. This would involve the establishment, by such board or officer, of proper quarantine precautions or the necessary aid and counsel to local authorities on the subject, prompt advice and assistance to local boards of health or health officers in the suppression of contagious diseases, and in cases where there are no such local boards or officers, the immediate direction by the National Board or officer, of measures of suppression, constant and authentic information concerning the health of foreign countries and all parts of our own country, as related to contagious diseases, and consideration of regulations to be enforced in foreign ports to prevent the introduction of contagion into our cities and the measures which should be adopted to secure their enforcement.

"There seems to be at this time a decided inclination to discuss measures of protection against contagious diseases in international conference with a view of adopting means of mutual assistance. The creation of such a National Health Establishment would greatly aid our standing in such conferences, and improve our opportunities to avail ourselves of their benefits. I earnestly recommend the inauguration of a National Board of Health or similar National instrumentality, believing the same to be a needed precaution against contagious disease and in the interest of the safety and health of our people."—*American Lancet.*

How "Cognac" is Manufactured.

In a thoughtful pamphlet just issued by DR. SALOMON, "Sur l'Alcool et la Depopulation de la France," I find a recipe for a mixture which, added to any kind of *eau-de-vie*, will import to it the bouquet of cognac. Take mixture of castor-oil butter, cocoanut oil, and other fats, and allow nitric acid to act on it. The product is a mixture of propyllic, butylic, amyllic, palorgonic, acetic, caprylic, conanthylic, capronic, and valerianic acids. Etherify it by the addition of methyl, ethyl, and amyl alcohols, and a product is yielded from 100 to 150 grammes of which will convert a pipe of 100 hectolitres of *eau-de-vie* into cognac. One centigramme of this *cognacogen* injected subcutaneously kills a large dog in ten minutes. One cannot help smiling sadly when one remembers that thousands of individuals pay up to a franc

for a small glassful of this poison, declaring as they sip it that nothing equals a drop of good *fine champagne*, as the stuff is called, for helping a sluggish digestion after a generous dinner. There is surely "death in the pot."—*Paris Correspondent of Lar.*

Bacteriology of Hospital Bed-Cards.

TRONSHOLIAVSKI has positively established the fact that papers that have been in contact with or close to patients are capable of storing up (for future dissemination under favorable conditions) large numbers of pathogenic microbes and indifferent micro-organisms, and that hospital bed-cards afford capital store-houses for these germs of disease, while case-books that have been used at the bedside and then locked away for a year or two also contain microbes to some extent. Sterilised paper could not, he finds, be considered as a germicide, as virulent micro-organisms, when placed on dry sterilised paper, had their virulence unimpaired for considerable time: Thus the comma bacillus retained full vigor for 5 to 14 days on such sterile paper, the diphtheria bacillus for 38, the typhoid for 63 and streptococci for 98 days.

Epidemic of Gonococci Vulvitis: Transmission by Thermometres.

BARNON AND WELL report several cases where recording temperatures per rectum without proper disinfection of the thermometer before introduction to a fresh patient gave rise to an epidemic of gonococci vulvitis which gradually subsided after the order was given to keep all the hospital thermometres soaking in 1 per cent. bichloride solution and after each using to steep them in muriatic acid (1 in 3) wipe them dry on sterilised lint and lubricate with boricated vaseline, because merely wiping the "bulb" with a rag anoluting them with 25 per cent. carbolic solution was by no means sufficient to retard or dispense with the risk of infection.

How to deal with Small-Pox.

THE annual report for 1893 of the health officer for the borough of Stockport contains a short account of the measures adopted by the sanitary department in the face of a threatened small-pox prevalence. There were in all 30 cases in the year up to the end of August, and no fewer than 21 of these were separate and independent introductions of the disease, 10 being tramps. In addition to isolation of cases in hospital thorough disinfection of infected houses and articles was carried out; nine stations were opened for evening attendances for gratuitous vaccination; hand-bills were widely distributed; re-vaccination was urged; the press also lending its assistance, and employers of labor co-operating with the sanitary officers; every common lodging-house was nightly visited, and several cases of small-pox in this way found in an early stage of disease; all cases of illness in these houses were at once made known to the health officer: the inmates were, so far as they consented, vaccinated on the spot; and the medical officer of the workhouse satisfied himself as to the condition of all casuals discharged into the town. It is satisfactory to learn from DR. PORTER that these steps were so far successful that only 9 secondary cases of small-pox arose as a result of the 21 introductions of the disease into the town. The measures adopted are worthy of imitation in other places similarly threatened.

THERAPEUTICS AND PHARMACOLOGY.

Antitoxin in Diphtheria.

As the result of the employment of ARONSON'S antitoxin, in 128 cases of diphtheria treated in the Empress and Empress Frederick's Hospital for children, KATZ reports only 17 deaths or a 13.2 per cent. mortality. From 5 to 25 c.c. of the antitoxin, according to the gravity of the case and the age of the patient were injected just below the scapula and repeated the following day if the child were not better.

Tracheotomy with 5 recoveries was performed on 17 and intubation (all recovered) on 5 out of these 128 cases. The prophylactic value of the antitoxin was shown by the fact that out of 110 of the brothers and sisters, of the affected children, who were given an injection only 8 contracted the disease, and only in a very mild form.

Thyroid Extract in Infantile Myxodema.

IN a recent paper before the American Pediatric Society, DR. OSLER reported successful treatment of infantile myxodema in which the administration of the Thyroid extract produced the happiest results; first, in the entire loss of the cretinoid aspect, in improvement in color, and in the general nutrition; second, in rapid development, as patient had grown four inches in height in a period of fourteen months, and is able to walk and run—before, he had been carried around in the nurse's arms; third, the mental development has been proportionately striking—for fourteen months, his vocabulary consisted of "mama" and "papa," and now he talks fairly well. No one meeting the child for the first time would have any idea that there was anything peculiar about him. Although he is still undernourished and undeveloped, not talking as plainly as an ordinary child of his age, the improvement is very marked and gratifying. He took an amount of extract corresponding to about a quarter of a gland in each twenty-four hours.—*Medical Age.*

Biniolide of Mercury.

P. K. BOLSHESOLSKY strongly recommends biniolide of mercury as an antiseptic in obstetrical and surgical practice. A 1 to 10,000 solution is quite sufficient for all purposes. In normal obstetrical cases the external genitals alone should be washed with the lotion, while in the presence of endometritis free intrauterine irrigations are necessary as well. As the author's extensive experience has shown, the solution affords a valuable means not only protecting the parturient woman from septic infection, but even of cutting short incipient septic processes. In surgical practice he used the biniolide for washing out the abdominal cavity (in laparotomy), pleura (empyema), cerebral meninges (traumatic injuries), and synovial membranes (suppurative arthritis). Although he always used the solution very freely, he never saw any untoward effects, and hence considers the drug "decidedly harmless." Bolshesolsky's favourable opinion of the biniolide is shared by many Arkhangel'sk practitioners, as may be gathered from the fact that the Society, after hearing his paper, he took appropriate measures for placing the solution within the reach of all local midwives.—*Brit. Med. Jour.*

For Hæmoptysis.

| | | | |
|-----------------|-----|-----|----------|
| R Ergotini | ... | ... | gr. xx. |
| Acidi gallici | ... | ... | gr. xl. |
| Syrupi tolutani | ... | ... | f3iv. |
| Aque | ... | ... | ad f3iv. |

Misce et fiat mistura.

S—One teaspoonful to be given every two or three hours.—*The Practitioner.*

Excoriations in Children.

The following ointment is spoken highly of in the excoriations of children:

| | | | |
|-----------------------|-----|-----|----------|
| R Salicylic acid | ... | ... | gr. viij |
| Subnitrate of bismuth | ... | ... | 3j |
| Starch | ... | ... | 3iss |
| Rose ointment | ... | ... | 3j |

(*L'Union Medicale.*)

For Intercostal Neuralgia.

| | | | |
|-----------------------|-----|-----|----------|
| R Liniment belladonna | ... | ... | f3j |
| Liniment chloroform | ... | ... | f3iv. |
| Liniment opii | ... | ... | ad f3ij. |

Misce et fiat linimentum.

To be well rubbed over the painful area.—*The Practitioner.*

Correspondence.

DR. BAHADHURJI ON MEDICAL POLICY
IN INDIA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—DR. BAHADHURJI's famous National Congress speech published by him in the *Record* of 16th January, criticising the local medical services, is more conspicuous for its rhetoric and sarcasm than the object which he tries to aim at. Indeed, the whole spirit pervading the speech inclines towards a suspicion of disappointment more than as an effort to improve the status of the classes he championed at the above Congress. It is fully admitted by all right-thinking men that the Civil Assistant Surgeons and Hospital Assistants not only deserve, but demand, a substantial improvement in their professional, official and financial position. The earliest consideration of the Indian Medical Association is, I believe, being devoted to this cause, and if a gentleman of Dr. BAHADHURJI's eloquence and high attainments, acted with more moderation, instead of drawing odious comparisons, he would readily enlist the sympathy of Government in remedying grievances which exist without a doubt.

The Military Assistant Surgeons in former years endured a good deal of hardship, both financially and professionally; the ambition of their goal ended with an Apothecaryship and a retiring pittance at the end. In consideration of this, it was an accepted privilege by them to undergo an extra two years' study to qualify for the Military Assistant Surgeon grade, or in being promoted in their old age to be Honorary Surgeons. Their duties being intimately associated with the army, where many changes were going on, it became necessary for Government to equalise their footing by changing the misnomer of Apothecary—a meaningless expression—by granting them proper warrants and honorary commissions, together with a professional prefix. This comparison was, doubtless, made with reference to the Ordnance, Barrack, Transport and similar departments, and to enable them to exercise the requisite discipline in station hospitals or in connection with their control over the military sick. Owing to this branch of the medical service being purely a military one, Government is very naturally anxious to reserve it for Europeans and Eurasians, as "Tommy Aitkins" objects to be bossed by a native; and, if "John the Christian" to whom Dr. BAHADHURJI alludes, does slip in under false colors or fraudulent conditions, it is unfortunate for the department, and certainly irritating to "Paudyal the non-Christian." This, however, is neither a race nor a religious question, it is abstract policy on the part of the authorities to see that "Tommy Aitkins" is governed by his own kith and kin in matters medical. Hence the Army Medical Staff is an exclusive service. A reserve of Military Assistant Surgeons must be retained to meet the exigencies of the State, and the surplus over requirements has to be provided for. These are drafted into civil employ, and are likely to be returned to military duty at a moment's notice; but those so employed are invariably men of proved ability, capable of doing credit to their appointments. Men with considerable experience in addition to their collegiate training rewarded in most instances for distinguished field

service, or in consequence of being further qualified at home.

In all Indian medical colleges the civil and military students study side by side, the former perhaps having a slight classical advantage, matriculation being so construed. The military student is not called on to pass a test of this nature, yet, as a matter of fact, fifty per cent. have succeeded in doing so, and he only undergoes a four years' curriculum, while his civil friend has to complete, according to the regulations of the General Medical Council, a five years' course. This seems an advantage, but the Military class have to do all the practical drudgery and dispensing of the college hospitals, including night watches; so that taking them all round, the difference is merely one of simple proportions. Omitting exceptions to the rule, there are among civil students graduates in Arts and Science, whose superiority cannot be disputed, but this is a question of money, expended to enhance the position of those who possess these degrees, yet withal occasions have occurred when the military student has competed successfully against his Indian and English-trained brethren in competition for a commission in the I. M. S. Military Assistant Surgeons are nearly all descended from men who have sacrificed life and limb in helping to build up the Indian Empire, the consolidation of which has given security of life and property to all castes, creeds and aliens, and no amount of platform oratory is likely to alienate the obligations of Government from an important and indispensable section of its servants. Surely Dr. BAHADHURJI is not seriously in earnest, when in trying to elevate one class of public servants he imagines he can gain his end by decrying another class in terms of bitter but ill-fitting sarcasm! I believe the very class whose cause he is expounding would be the first to resent any such intention. The military have fought and won, despite the facetious allusion to the "Chief Medicin Militaire" in or out of plain clothes, and if the Civil Assistant Surgeons adopt similar constitutional tactics, there is not a shadow of doubt in Government being unable to resist all reasonable demands, as regards status, pay, pension, or promotion into the uncovenanted grades. Theirs and the Hospital Assistants' cause is a just one. They have waited long in patience with too much silence, and though it may be little consolation, it is a sober fact, that "all things come to him who waits."

The remaining part of Dr. BAHADHURJI's speech *apropos* the professional staff of the Medical Colleges, has an element of truth, in so far that the transfer to military or other duties of a professor, and substitution of another man accomplished enough, but perhaps not in immediate form, is detrimental to "up-to-date" teaching. Whether the Indian colleges be kept supplied with professors from the same source or from without, bears a responsible change to new risks, but doubtless with the profession getting revolutionised almost daily, the selection of professors will have to occupy the serious thought of Government. Irrespective of this, such names limited to "Urbs Primus in Indis" as HUNTER, MACKENZIE, SYLVESTER, COOK, STEADMAN, LYON, HUGHES, DYMCK, WELLINGTON GRAY, and MACONACHIE have tended to make the I. M. S. the backbone of the profession in India.

Lastly, I think a strong protest ought to be sent forward against others, than professors of colleges being allowed

to compete in private practice with the unofficial practitioner, and that professors act only as consultants, as their constant undivided attention to the duties of their own particular branch of work alone makes them specialists, and as such the public should have the advantage of their services as consultants. It is unfair and inequitable for a man in receipt of Government emoluments, who in consequence is able at once to keep up style and appearance, to be allowed to compete with men who have first to make their living before putting on "style," and it is an undoubtedly weak point with patients and others, to surmise that the man who maintains the best trap and horse is naturally the smartest man. Of course the insinuation among non-official practitioners is probably correct that all things being equal, whether it be due to skill or luck, policy or tact, the attention of Government needs directing on this vital matter.

Yours, &c., ALF. MCCABE-DALLAS, L.M., Dub. L.R.C.P. &c.
KUMBHIL; 4th February 1895.

STRYCHNINE AND SNAKE-BITE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I have to thank you for your courteous criticism of my paper on strychnine as an antidote for snake-poison in your issue of 1st February.

When I sent my paper to you, I had not expected that you would do me the honor of publishing it in full, but as you were good enough to do so, I regret that you omitted the *tables* appended to the lecture. Since constant reference is made to these tables in the letter-press, their absence renders my remarks much more difficult for your readers to follow. This especially applies to the tables of recorded cases.

With regard to your criticism on the dose of cobra-poison injected, you say that "if more than the ordinary dose of cobra-poison was administered, the experiments are useless."

In this point I was always at one with you, as you will see by reference to my remarks, quoted on the first column of page 80 in your paper in which my address appears.

There I twice repeat the statement that before commencing antidotal experiments I carefully ascertained the minimum fatal dose of cobra-poison.* I also explained that I did this with the object of giving strychnine the fullest opportunity of saving the patient in those cases, where life trembled in the balance. Obviously if an antidote fails to cure such cases, it will be, if possible, more powerless in those where a larger dose of poison has been received.

That I did use the minimum dose, or at least a dose far below that which a cobra would have injected, I think will be obvious from the few following considerations:

A reference to my tables bears out the common experience that there is some ratio between the body weight of an animal and the duration of life after cobra-poison has been injected. In man, death after cobra-bite commonly occurs in from 20 minutes to 8 hours.

A reference to my Appendix (No. II) will shew you that in only two cases did death occur in under 20 minutes, and these cases were promptly rejected as those in which too big a dose had been given. As a rule, you will find the

duration of life ranged from one to several hours, one animal taking over 12 hours to die.

There was a more serious objection, which I had anticipated hearing raised against my paper, *etc.*, that the poison used was exclusively that of the cobra. Since the publication of my first work on this subject, I have been able to remove all fear of that objection, as I have carefully repeated my experiments with Dabola and Krait poison, and have also experimented with Echis. I hope to read a paper on the subject shortly before the local branch, and I think that most people will then be with me in condemning strychnine as a remedy for all or any varieties of snake-poison.

Yours, &c., ROBERT HENRY ELLIOT, M.B. Lond., F.R.C.S. Eng.

Surgeon-Lieutenant, J. M. S.

Acting Professor of Biology, Presidency College, Madras.
MADRAS; 8th February 1895.

(* This statement of Professor Elliot's fully meets our objection on the score of experimental care with regard to the minimum fatal dose: for if the minimum fatal dose be the starting point of our antidotal experiments, we are working on a safe practical basis. But we would ask, what is the minimum fatal dose of cobra venom for a man? The difference, if there be any, and there probably is a difference between the minimum fatal dose of cobra poison, for a monkey, a dog or other experimented animal and man, needs elucidating and definitely fixing, before the utility or futility of an antidote can be accepted as proved experimentally and scientifically. For admitting, as we do admit, an analogy in the lethal action of cobra venom on the lower and higher animal organisms, still this analogy must be bounded by fixed and definite limitations, and before these limitations are demonstrated and proved, the results of experiments on one section cannot in obedience to the simple laws of Nature, or logically either, be held to effect another section of the animal kingdom without a difference.—ED., J. M. R.)

THE BOMBAY MEDICAL COLLEGE AND PRIZES FOR MILITARY STUDENTS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The military medical students of the Calcutta Medical College are allowed to sit for honors in all their examinations, and invariably come off gloriously. Those of the Grant Medical College are not allowed this privilege, though they are in every way as good as those at Calcutta, and I am sure would make as good a show if only allowed a chance. The majority of the batch who passed out as Assistant Surgeons for Bengal from Bombay, in September 1894, were matriculated students, who stood in no fear of the University students of their years—1890 to 1894—and the Principal and Professors often acknowledged this fact as an advantage to our class. The first three in the batch, J. V. JAMES, J. W. LAWRENCE and R. H. HART were ready to compete among other prizes, for a special surgical prize presented by Professor W. K. HATCH for clinical surgery.

But Dr. HATCH went on furlough, and the acting senior surgeon thought the prize was only meant for the "civil" students, whereas it was Dr. Hatch's express wish to test the difference between the military and the University students.

The three above-named students got no medals or prizes though they came off successfully in a well-contested examination. The Bengal Government ought at least to allow one medal for the next examination in September 1895 to be computed for by the hands for Bengal, and the Bombay Government might follow suit for the benefit of the Bombay hands instead of leaving us without any encouragement.

Yours, &c., REGULARS JUNIOR.

BOMBAY; 8th February 1895.

THE I. M. A. MEMORIALS ON CIVIL ASSISTANT SURGEONS AND HOSPITAL ASSISTANTS.

I.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Many thanks to the Council of the Indian Medical Association for taking up the cause of Civil Assistant Surgeons. They have placed us under a deep debt of obligation by their prompt, energetic and timely submission of the memorial on our behalf to the Surgeon-General with the Government of India. God knows how pinched we are, and He will bless the endeavours made to succour us. Thanking the *Record* also for its kindly sympathy and unselfish exertions on our behalf.

Yours, &c., GUNGA GOVINDA SARKARA, L. M. S.
Assistant Surgeon.

NATORE; 11th February 1895.

II.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—On my own behalf, and on behalf of several Civil Hospital Assistants who have rejoicingly talked with me on the subject, I beg to express our entire approval of the action taken by the Indian Medical Association with regard to the grievances of Civil Hospital Assistants and the amelioration of the same. Our heartiest thanks are due to the Council, and we are truly grateful.

Yours, &c., T. N. MUDALIAR, C. H. A.

III.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Words fail to express my sense of gratitude to the members of the Council of the Indian Medical Association for the interest they have taken on behalf of Civil Assistant Surgeons. The representations of the council regarding our grievances and those of Civil Hospital Assistants are very appropriate and to the point. All should be satisfied and heartily thankful. I now hasten, for my own part and for your readers in these provinces, to thank you and your colleagues for the pains you have taken in laying our grievances so ably and fully before the fountain head of the Indian Government.

We look upon the Council of the Indian Medical Association as a truly representative body, not only of the association, but of the medical profession in India, which we civil Assistant Surgeons and Hospital Assistants can repay only by gratitude.

As money will probably be required to cover incidental expenses, I for my part will be very glad to contribute my own share should a list of subscriptions be opened in the *Indian Medical Record*.

Yours, &c., H. D. PANT, L.M.S.
Assistant Surgeons.

GONDA, OUDH; 5th February 1895.

[* There is nothing to pay. The funds of the Indian Medical Association will meet the trifling expenses of all appeals to Government, but every member of the classes for whom the Association has labored and will continue to labor, will help their cause and the cause of the profession in India, by immediately joining the Indian Medical Association. —Ed., I. M. R.]

IV.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In cordially thanking you and the members of the Council of the Indian Medical Association for their kind efforts in representing our grievances to the Government of India, I beg to touch upon two or three points raised in the memorials.

Of course first and foremost comes the question of our pay. It is generally argued that the Assistant Surgeons are allowed private practice in consideration of their small pay. Throughout the North-West Provinces, in which I am serving, there are not more than half a dozen stations where there is any income from private practice worth the name. Even in these large stations, the competition between the official and non-official practitioners is so keen that the official practitioners are usually ousted from the field owing to their inability to attend to a patient at the latter's convenience, in consequence of their hospital duty morning and evening. I have myself lost paying patients by my inability to attend upon them during hospital hours. Where there is a choice, the patients naturally give preference to non-official practitioners, who can be called in at any time their services are needed, whereas the time a service man can spare for his private patients is very limited. Those who pay the piper are entitled to call the tune at any time, and they expect the tune played.

In consequence of the inadequate salary we draw, there is always a temptation to add to it by private practice whenever the chance turns up, to enable ourselves and our family to keep body and soul together. If this temptation is yielded to during hours of duty, the hospital work suffers.

By raising the salary of the subordinate medical officers, the Government will considerably relieve their pecuniary anxiety, and they will be able to devote their hours of duty exclusively to Government work.

Admitting that in such large stations the income from private practice compensates for a small salary, what is to console the majority of those Assistant Surgeons who are employed in small stations where the income from private sources does not amount to more than a beggarly sum of Rs. 10 or 20 per month. Transfers to large stations are completely blocked. Those who have once secured them, have become fixtures for life. For unfortunates, like the writer, the choice lies between the proverbial "frying pan and the fire."

At the present rate of pay, we are totally unable to keep abreast with progressing science. The buying of reference and standard books is out of the question, even ordinary books and medical papers are purchased by sacrificing some necessary comforts. In out-of-the-way towns, where we have to depend upon our own resources in times of emergency and no one to consult with, it is absolutely necessary that we should have a well-equipped library of medical books and papers, but the question "How and where-with" haunts us.

About our social hardships we are simply looked down upon. In India, peoples' worth is gauged by the position they hold in Government service, and among the Government servants by the amount of salary one draws. A separate caste of Government servants has come into existence, in which the position assigned to each member depends upon the *hakumat* he possesses or the rupees he draws monthly. The Assistant Surgeons' position in this official caste system may easily be imagined.

2nd. Is it not an anomaly to subject us to the restrictions of the Arms Act when all other subordinates of similar grades in other departments are exempted. We may keep any number of long, sharp and pointed amputating knives, deadlier than swords, we may keep any amount of the

deadliest poisons sufficient to poison the whole district, should we be so evil-minded, but we dare not carry arms! Is it not a reproach on the Government who will trust us with the valuable lives of its subjects and officers, but cannot trust us with a sword or a revolver for self-preservation without our undergoing the expense, botheration, and in some cases the humiliation, of getting a license.

3rd. As to our position in the durbars, &c. The Viceregal durbars seem to have taken a lesson from the official caste system above-mentioned, inasmuch as Rs. 250 per mensem has been fixed as the lowest pass-port pay for its servants for entering the durbars. Assistant Surgeons, as at present paid, can never aspire to the honor of being invited to these durbars by virtue of their position in their service. The scale of pay prayed for in the representation is very modest, and we look hopefully to Surgeon-Major General Rice for his warm and generous support, and trust that he will, as an act of parting grace, be able to induce the Government of India to grant the prayer of an underpaid and long neglected class of Assistant Surgeons and Hospital Assistants before he leaves the field of his life-long labor.

Yours, &c., ASSISTANT SURGEON, N.-W. P.

WARRANT MEDICAL OFFICERS' PROVIDENT FUND.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—As your journal is so widely circulated and read by every member of our Department, I venture to ask your permission to give publication to the following, and I feel sure that the request therein made with reference to the *Record* will be gladly granted.

There have been several letters written under various non-de-plumes to the Provident Fund, once so flourishing, and as these letters have elicited no response, or the much looked for report, which used to be so regularly furnished during the time of the late Mr. E. A. THOMSON, I feel that Captain Wade should submit a similar report without delay. From personal experience I know that a M. W. O. in sub-charge of a station hospital has more than enough to cope with in his office with the multifarious returns and voluminous correspondence, and though he is willing to do other work he is very hard pressed for time, so much so, that I have known several who cannot even indulge in a game of tennis on an evening.

As no one appears to know who is the President and Managing Committee of the Provident Fund, I would ask those who have the interest of the Fund at heart to send your Manager the small sum of 8 annas to enable some one as secretary to send round circulars and call for votes for a new Managing Committee, when the elected secretary would be asked to take over the books from Captain Wade who should now submit a report at his earliest convenience.

I feel convinced that when the members find an energetic man hoist the standard, they will one and all gladly join such a laudable fund, and even those who have not paid for some years may join as fresh members with a small penalty.

In selecting a Secretary I would suggest the following names though there are others unknown to me who may be

as good, if not better. I have also had in view that no one in sub-charge of a big Station Hospital should be named.

Here are the names:—Assistant Surgeons Luke, Hynes, McArdle, Ressurricao, Mason, Victor, Nugent, Mungavhu, Nazareth, Forrester.

Yours, &c., PATER FAMILIAS.

[Surgeon-Captain Wade promised a report, and we shall be glad to publish it when it comes.—ED., J. M. R.]

THE EFFECTS OF ANTIPYRIN AND ANTIFEBRIN ON TEMPERATURE, IN TWO CASES OF ENTERIC FEVER.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The following observations on two well-marked cases of enteric fever exhibit the action of antipyrin and antifebrin in reducing temperature:—

(1). In *Case I*, after antipyrin, the temperature fell from 101.6 to 99.4 in two doses, and it rose again in an hour and kept on rising, unaffected, in spite of the continuance of the drug.

(2). In *Case II*, the same result was produced; the temperature falling from 102 to 99.8, after four doses of this drug, and then rising and remaining unaltered by it. Antipyrin was continued for five days, and the result proving unsatisfactory, antifebrin was next tried.

The first dose of 5 grs. of antifebrin in each case reduced the temperature to sub-normal in three hours' time and was accompanied by profuse sweating and marked collapse. The dose was accordingly reduced to one and a half grains twice daily, at 9 A. M. and 2 P. M. Under this dosage at 12 noon the temperature in each case was reduced to normal; the second dose however was found not to have the same effect, as by 4 P. M. the temperature had again risen and remained between 102° and 103.8°F. Antifebrin was also discontinued after five days' trial, as it was found to have no lasting effect in keeping the temperature low.

Yours, &c., A. BEALE, Assistant Surgeon.

In Medical Charge R. I. M. S. "Clive."

RANGOON; 16th February 1895.

A MADRAS GRIEVANCE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The Government of India have of late been pleased to favor the Civil Hospital Assistants, serving under the Madras Government, with the grant of free quarters or house rent in lieu thereof. The same class serving solely under the Local Boards of Madura, Nellore and Tanjore districts, are not yet permitted to enjoy this privilege, and I would beg to draw the kind attention of the Government of Madras to the omission. These Local Fund men are exposed to the same difficulties and disadvantages as other Civil Hospital Assistants, for whom the free quarters or house rent in lieu thereof has been sanctioned. Will you, therefore, be kind enough to lend your valuable advocacy to the claims of Local Fund Hospital Assistants in the columns of your widely circulated journal.

Yours, &c., A MADRAS L. F. MEDICAL OFFICER.

[We feel sure this grievance needs ample mention to find early redress.—ED., J. M. R.]

REVIEWS.

THE ENLARGEMENT OF THE PROSTATE: ITS TREATMENT AND RADICAL CURE. By C. W. Mansell Moullin, M.A., M.D., Oxon, F.R.C.S. Surgeon to and Lecturer on Physiology at the London Hospital; late Radcliffe's Travelling Fellow and Fellow of Pembroke College, Oxford; and Hunterian Professor at the Royal College of Surgeons. (Published by H. K. Lewis, 136, Gower St., London W. C., 1894. Price 6 shillings.)

The present work on enlarged prostate by Dr. C. W. Mansell Moullin is quite unique in its way, for very few (if indeed any) similar works have preceded it. We do not recollect having come across any within the last two years. We have here the record, with incontrovertible concomitant evidence, of accurate and close observations, coupled with "experimental" or exploratory operations made for the relief and cure of enlarged prostate. The new operation of castration to secure these ends sounds at first alarming. Dr. Moullin does not claim to be the first or only performer of this operation. It was performed for the first time by Professor Ramm of Christiania.

Taking the results obtained and the relief ensured in a remarkably short time, side by side with the new operation as the only safe alternative, it certainly recommends itself, in that it is better to lose both testicles at a time of life when the general power is more or less in abeyance and obtain perpetual and permanent relief, than drag out a miserable existence, longing for death to terminate a series of symptoms that may have lasted for years.

The belief in the purely sexual character of the prostate has led step by step to the undertaking of this new departure in genito-urinary surgery, and certainly if results go for anything, it promises to surgeons an alternative method of treating enlarged prostate well worth a trial, when all other means have failed, always of course with the free consent of the patient, the operation having met with a sufficient amount of success to justify a choice being laid before the patient. The work consists of 167 pages, and is divided into 12 chapters dealing with the normal structure and function of the prostate.

Its enlargement, causes of enlargement, effects of enlargement on bladder and kidneys, symptoms, diagnosis, general and local treatment, radical treatment, consisting of rectal, urethral, perineal and supra-pubic operations, and lastly *castration*. The good effects of castration are said to be observed from the third day, and in a few weeks the patient is cured, the enlarged prostate having atrophied from the size of an orange to a "flat fibrous mass" scarcely discernable. This atrophy is "a change totally different from disappearance of congestion and shrinkage after puncture."

ESSENTIALS OF THE DISEASES OF THE EAR, ARRANGED IN FORM OF QUESTIONS AND ANSWERS PREPARED ESPECIALLY FOR STUDENTS OF MEDICINE AND POST-GRADUATE STUDENTS. By E. B. Gleason, S.B., M.D. Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia; Surgeon in charge of the Nose, Throat and Ear Department of the Northern Dispensary, Philadelphia. (Published by W. B. Saunders, 925, Walnut Street, Philadelphia, 1894. Price 12.)

The work on Otology under review is another of SAUNDER'S excellent "Quiz compends," arranged in the form of questions and answers. DR. GLEASON'S aim in placing such a compend before students has been to enable them with as little preliminary reading as possible to acquire the rudimentary facts of otology. The book is designed to supplement the necessarily brief series of lectures that are usually given in otology during a college course. This aim has been admirably fulfilled in the work before us. It is brief, accurate, succinct, and to the point. The first 19 pages are devoted to the anatomy of the ear, most essential to the right understanding and appreciation of diseases affecting different portions of the aural canal. Next, several *tests for hearing* are discussed, noticing also acoustics and sound. Then come in order, *diagnosis and treatment*, noticing rhinoscopy and pathological conditions of the nose causing ear disease, *examination of patients*, diseases of the *external ear*, *membrana tympani of the middle ear*, *operations on the middle ear*, *miscellaneous diseases*, such as mastoiditis, concussion of labyrinth,—hysterical deafness, syphilis of internal ear, Meniere's disease and diseases of the labyrinth. Lastly a number of *formulae* are appended, most of them original and such as in "the personal experience of the author have proved most efficacious in the treatment of the majority of cases," such remedies as cocaine, alcohol, chinoline salicylate, aluminium, &c. are mentioned, which will no doubt be utilized in this country some day.

The amount of information Dr. GLEASON has conveyed in the 142 pages of his excellent little manual will, if remembered and followed by the physician or student, equip him perfectly to combat diseases of the ear with comparative ease and precision. There are 89 good illustrations added, explanatory of the letter-press, and the paper and printing are all that could be desired.

In noticing any disease, in each case, the pathology, etiology, symptoms, prognosis and treatment are taken up and discussed separately and in the above order, all in question and answer form, enabling the student the more readily to grasp and retain the knowledge thus derived.

THE DYSPESIA OF PHTHISIS: ITS VARIETIES AND TREATMENT, INCLUDING A DESCRIPTION OF CERTAIN FORMS OF DYSPESIA ASSOCIATED WITH THE TUBERCULAR DIATHESIS. By W. SOLLAN FENWICK, M.D., B.S. Lond. Member of the Royal College of Physicians; Assistant Physician to the Evelina Hospital for Sick Children, &c. (Published by H. K. Lewis, 136, Gower Street, London, W. C. Price, 6s.)

DR. SOLLAN FENWICK has laid before us the *summa ultimum* of his untiring and extensive researches on the subject of the *dyspepsia of phthisis* in the work before us. In the eight chapters devoted to its discussion he has accumulated a vast number of facts, the result of original study.

His first investigations were chiefly devoted to studying *post-mortem* morbid conditions of the stomach found in phthisical patients. Later on he observed that not only the stomach but the whole of the intestinal tract exhibited a characteristic inflammation concurrent with the formation of *cavities* in the lungs. These pathological conditions he compared with the former *post-mortem* results and demonstrated two varieties of dyspepsia associated with phthisis.

*The one apparently functional and presenting no histological changes in the stomach, while the other is invariably associated with chronic gastric catarrh." These are recorded in chapters IV and V. The actual connection between organic disease of the stomach and pulmonary tuberculosis, is noticed and briefly discussed in Chapter III. In addition to the above points, the following are also taken up:—Morbid states of the stomach in phthisis, pathology of the gastro-enteritis of phthisis, the dyspepsia of tuberculous children, the variety of dyspepsia which usually occurs in and accompanies the first stage of phthisis, the variety accompanying the final stage and perforation of the gastro-intestinal tract in phthisis. These points are all thoroughly and ably discussed, while the treatment in each case receives a large share of attention.

The contents of these 200 pages are well worthy the perusal of practitioners and senior students, and may be used generally as a work of reference side by side with clinical work in the wards or in private practice. Though not strictly a text-book on the subject of the dyspepsia of phthisis, Dr. SOLLAN FENWICK'S *opusculum* ranks high as a standard work on one of the most important and least understood lesions occurring during the course of that very scourge of diseases—*phthisis pulmonalis*.

Government Medical Gazettes.

GOVERNMENT OF INDIA.

Surgn.-Lieut. Bruce Gordon Seton, who has completed three year's full pay service, to be Surgn.-Capt., 30th Jany.

Surgn.-Lieut.-Col Herbert Boyd, I. M. S., has been permitted to retire from the service, 15th Jany.

Hosp. Asst. Solomon Ezekiel, of the 6th Bombay Cavalry, offe. at the Civil Disp., Fort Sandeman, in addition to his own military duties from the 1st Feb. to the 30th Sept. The service of Surgn.-Capt. W. Vost, M.B., C.M., I.M.S. (Beng.), which were placed temply. at the disposal of the Govt. of the N.-W. P. and Oudh, are placed permanently at the disposal of that Govt.

Surgn.-Lieut. J. Fisher, M.B., I. M. S. (Beng.), Offg. Med. Offr., 35th Beng. Infy., is apptd. temply. to the med. charge of the Bundelkhand Political Agency, in addition to his mily. duties, 28th Dec. 1894.

Surgn.-Capt. C. H. Bedford, M.D., I. M. S. (Beng.), to be med. offr., Lawrence Military Asylum, Banawar, *vice* Surgn.-Lieut. H. M. Earle, 25th Jany.

Surgn.-Capt. W. J. Buchanan, M.B., is granted an extension of leave to 3rd Oct. 1894.

Asst. Surgn. C. A. Owen, in med. charge of the junior grades of the Secretariat Establishments of the Govt. of India at Simla, is granted priv. leave for one month and fifteen days, 9th Jany., and Asst. Surgn. J. W. Hogan, in med. charge of the Army Head Quarters, is apptd. to offe.

BENGAL GOVERNMENT.

Surgn.-Capt. H. W. Pilgrim, 2nd Readt. Surgn., Presdy. Genl. Hosp., to act as 1st Readt. Surgn. of that institution, *vice* Surgn.-Capt. J. H. T. Walsh, from the date on which he was relieved of his offg. duties as 1st Readt. Surgn., Presdy. Genl. Hosp., Surgn.-Capt. D. M. Moir, Depy. Sany. Commr., Metropolitan and Eastern Beng. Circle., to act as 2nd Readt. Surgn., Presdy. Genl. Hosp., *vice* Surgn.-Capt. H. W. Pilgrim.

Dr. Peary Mohan Gupta, offg. civil med. offr. of Faridpur, to be civil med. offr. of the Chitragong Hill Tracts, but will continue to act as civil med. offr. of Faridpur until further orders.

Surgn.-Capt. B. C. Okilham, on being relieved of duties as Offg. Depy. Sany. Commr., Metropolitan and Eastern Beng. Circle., to do genl. duty at the Presdy.

Surgn.-Capt. Narendra Prosnano Sinha, on being relieved of his appt. as Offg. Civil Surgn. of Jessore, to act as Depy.

Sany. Commr., Metropolitan and Eastern Beng. Circle., during the absence, on deputation, of Surgn.-Capt. D. M. Moir.

Asst. Surgn. Narendra Nath Gupta to do superny. duty at the Med. Coll. Hosp. until further orders.

Asst. Surgn. Ram Chander Mousumdar to do superny. duty at the Med. Coll. Hosp., Calcutta, 4th Feb.

PUNJAB GOVERNMENT.

Asst. Surgn. Guranditta Mal resumed charge of his duties as Asst. Chemical Exmr. to Govt. and Lecturer on Midwifery to the Hindustani Class, Lahore Med. School, 15th Jany.

Priv. leave granted to Hosp. Asst. Labha Ram was extended up to the 31st Dec. 1894.

Hosp. Asst. Labha Ram was apptd. to the charge of the Sialkot Jail and Police Hosp. on the 31st Dec., relieving Hosp. Asst. Piranditta, retired.

Hosp. Asst. Ganesh Das, Anandpur Disp., Hoshiarpur Dist., two months' priv. leave, 12th Jany.

Hosp. Asst. Mangal Sam, doing genl. duty at Hoshiarpur, to the Anandpur Disp., Hoshiarpur Dist., 15th Jany.

Hosp. Asst. Suchet Singh, doing genl. duty at Gujrat, was deputed for duty on the N.-W. Ry., Sialkot Section, from the 19th Dec. to the 3rd Jany. He reported himself to Civil Surgn., Gujrat, for genl. duty on the 5th Jany.

On being relieved at the Bhakhar Ry. Hosp., Asst. Surgn. Dalip Singh, Teja, was apptd. to genl. duty at Amritsar from the 28th Dec. to the 2nd Jany.

Asst. Surgn. Dalip Singh, Teja, doing genl. duty at Amritsar, to do sanitation and vaccination duty in the Lahore Dist., 4th Jan.

Hosp. Asst. Imam-ud-din, awaiting orders at the office of Insp.-Genl. of Civil Hosp., Punjab, Lahore, was apptd. to the charge of the Sampla Disp., Rohtak Dist., 15th Jany.

Asst. Surgn. Hari Chand, Sirsa Disp., Hissar Dist., one month's extraordinary leave without allowances, and was relieved on the 17th Dec. by Asst. Surgn. Nazir Hussain, transferred from Gurgaon. Asst. Surgn. Hari Chand resumed charge of the Sirsa Disp. on the 16th Jany., relieving Asst. Surgn. Nazir Hussain.

Asst. Surgn. Parnia Nand resumed charge of his duties at the Gujranwala Disp. on the 21st Jany., relieving Asst. Surgn. Sodhi Karm Singh.

Hosp. Asst. Sobha Singh, doing genl. duty at the Civil Hosp., Rawalpindi, to the Gujrat Khan Disp., 17th Jany., relieving Hosp. Asst. Govardhan Das, apptd. to genl. duty at the Civil Hosp., Rawalpindi.

Hosp. Asst. Ghulam Hyder resumed charge of the Mayo Salt Mines Disp., Kheora, Jhelum Dist., 19th Jany., relieving Hosp. Asst. Phoolle Khan.

Asst. Surgn. Lachman Das, doing genl. duty at Sialkot, to the Leiah Disp., Dera Ismail Khan Dist., 21st Jany., relieving Asst. Surgn. Balia Singh.

Asst. Surgn. Khazan Chand made over Umballa Jail to Surgn.-Maj. L. T. Young, 31st Dec.

Surgn. Capt. C. Duer assumed charge of the civil med. duties of Kurram, 21st Jany., relieving Surgn.-Capt. C. H. Bedford.

Hosp. Asst. Lohoria Ram, doing genl. duty at the Civil Hosp., Ferozepore, was apptd. to the Jail Hosp., Ferozepore, 21st Jany., relieving Hosp. Asst. Masla Bakhs.

Hosp. Asst. Abdul Karim, from the Gobana Disp., Rohtak Dist., to the Okla Canal Disp., Delhi Dist., 27th Jany., relieving Hosp. Asst. Mumraiz Khan.

Asst. Surgn. Nazir Hussain, doing genl. duty at Sirsa, to the Muzaffargarh Disp., 29th Jany.

Asst. Surgn. Sodhi Karm Singh, from Gujranwala to Gujrat for genl. duty, 22nd Jany.

On being relieved of the Leiah Disp., Dera Ismail Khan Dist., Asst. Surgn. Balia Singh reported himself to the Civil Surgn., Mooltan, for genl. duty, 23rd Jany.

Hosp. Asst. Sahaiat Ali resumed charge of the Kamalia Disp., Montgomery Dist., 27th Jany., relieving Hosp. Asst. Sunder Singh.

Hosp. Asst. Govardhan Das, doing genl. duty at the Civil Hosp., Rawalpindi to the Hassan Abdal Disp., Rawalpindi Dist., 27th Jany., relieving Har. Asst. Ram Lal, who reported himself to the Civil Surgn., Rawalpindi, for genl. duty, 28th Jany.

First class Hosp. Asst. Masla Bakhs, doing genl. duty at Ferozepore, is permitted to resign.

MADRAS GOVERNMENT.

Surgn.-Capt. Clarence Forbes Fearnside to act as Suplt. of the Central Jail, Cannanore, during Mr. Young's employment on other duty.

Surgn.-Maj. S. C. Sarkies, six months' furlough.

Surgn.-Capt. G. C. Hall, extraordinary leave for six months.

Surgn.-Maj. R. Ross, I. M. S., 2 months' extension of leave (p. a.)

BOMBAY GOVERNMENT.

Third class Asst. Surgn. Joseph Henry Whittenbury, to be 2nd class Asst. Surgn., *vice* 2nd class Asst. Surgn. White, resigned, 4th Jan'y.

The undermentioned med. offrs. having completed three years' full pay service to be Surgn.-Capt.—

Surgn.-Lieut. William Carr Sprague, M.D., 30th Jan'y.

Miss Annie Walke, L. M. & S., Second Physician, Pestonji Hormasji Kama Hosp. for Women and Children, Bombay, on private affairs for six months, 1st March.

Miss Freany K. R. Cama, M.D., to act as 2nd Physician, Kama Hosp., *vice* Miss A. Walke.

Bai Bakhmabai, L.R.C.P. & S. (Edin.), to act as House Surgn., Kama Hosp., *vice* Miss Cama.

Surgn.-Maj. H. McCalman, M.D., furlough for one year, seven months and twelve days from 9th March.

Miss Freany K. R. Cama, M.D., House Surgn., Pestonji Hormasji Kama and Bamaaji Kadalji Albless Hosps., priv. leave for one month.

Surgn.-Maj. D. C. Davidson to act as Civil Surgn., Dhaniwar, *vice* Surgn.-Maj. H. McCalman, M.D.

Transfers of Hosp. Assts.—Maueklal Manondas, from genl. duty, Bombay, to House of Correction, 30th Nov., and back to genl. duty, Bombay, 13th Dec.

Gopalrao Ramchandram, from Sathana Dispy., to Vagra Dispy., 20th Dec. 1894, *vice* Keshavlal Chhotalal, transferred to Ilav, 1st Jan'y, *vice* Phirozsha Dinsha, transferred.

Daji Dhondeo Joshi, from leave to genl. duty, Bombay, 1st Jan'y.

David Joseph, from Civil Hosp., Thana, to Murbad Dispy., 8th Dec. 1894, *vice* Sayana Balloo, granted leave for one month.

Kassalnath Hari, from genl. duty to Civil Hosp., Thana, 7th Dec. 1894.

Samaldas Nanji, from special duty, Kaira, to genl. duty, Ahmedabad, 30th Dec.

Poonjabhai Thakeri, from special duty to genl. duty, Kaira, 1st Jan'y.

Narayan Vithal, from Khanapur Dispy. to Muddelbilal Dispy., 5th Dec., *vice* Pandurang Ganesh, transferred to Saundatti Dispy., 17th Dec., *vice* Yeshwant Vithal, transferred and granted leave for one month.

Sukharan Bhicaji, from Mundgod Dispy. to genl. duty, Karwar, 16th Dec.

Abraham Shallam, from Kapadvanj Dispy. to Civil Hosp., Mahabaleshwar, *vice* Chintamon Bulal, granted leave for three months.

Dattatraya Gunesh, from Supa Dispy., to Siddapur Dispy., *vice* Ramchander Balaji, transferred to Hausbennur, *vice* Purnashram Nagesh, transferred to Civil Hosp., Karwar, 8rd Jan'y, *vice* Waman Ram, *vice* granted leave and transfer to Panditnath Bhawrao, from genl. duty to Civil Hosp., Dhulia, *vice* Yeshwant Shridhar transferred to Dharangaon Dispy., *vice* Mahadeo Choodamon, granted leave for two months.

Udhev Deoji Power, from genl. duty, Poona, to genl. duty Balmagiri, 17th Dec. 1894.

Mahomed Bahimaukhan, from Civil Hosp., Muscat., to genl. duty, Bombay, 1st Jan'y.

Ramchander Gangadhar, from leave to genl. duty, Poona, 24th Dec.

Kassalnath Anant, from genl. duty, Nasik, to Satana Dispy., *vice* Ganpati Nilobo, granted leave for three months.

Krishnasji Dattatraya, from genl. duty to Civil Hosp., Belgawan, 8rd Dec. 1894, *vice* Govind Janardhan, granted leave for three months.

Jehangir Chahalade, from N.-W. By. Hosp. to Mirpur Bators, 23rd Nov. 1894, *vice* Sataramdas Ramchand, transferred to Kamber Dispy., 30th Nov. 1894, *vice* Joseph Isazal, transferred to Sehraan Dispy., 8th Dec. 1894, *vice* Chahermal Sardesai, transferred to Civil Hosp., Hyderabad, 10th Dec. 1894.

Khismal Hashmatrai, from Umarkota Dispy. to Civil Hosp., Karachi, 22nd Dec. 1894, *vice* Teohchand Lekhraj transferred to N.-W. By. Rnk. Dispy., 29th Nov. 1894, *vice* Bhowandas Hashmatrai, transferred to Mitti Dispy., 16th Dec. 1894, *vice* Choithram Shevakram, transferred to Mehar Dispy., 31s. Dec. 1894, *vice* Hiranand Nanumal, transferred to genl. duty, Shikarpur, 31st Dec. 1894.

Promotions.—Asst. Surgn. Santana Caridade Saldanha, from 22nd Jan'y., to the 1st class, 1st grade; Asst. Surgeon Vincent Edward Fernandez, from 22nd Jan., 2nd class, 1st grade; Asst. Surgn. James Earnest Barton, Macqueen, Asst. to the Surgn. to H. E. the Govr., held independent medical charge of H. E.'s Band Body Guard, and house-hold establt. at Poona and Bombay from 3rd Nov. to 11th Dec. 1894.

Hosp. Asst. Wamon Kassnath, is placed on genl. duty, Bijapur, 29th Dec. 1894.

Hosp. Asst. Chinanlal Mahasankham is placed on genl. duty, Bombay, 11th Dec. 1894.

Hosp. Asst. Luxumon Narayan received charge of the dispy., Mundgod, 12th Dec. 1894.

Hosp. Asst. Phirozsha Edulji Bharucha received charge of the dispy., Satlana, 19th Dec., 1894.

Hosp. Asst. Mahadeo Shankar received charge of the Civil Hosp., Thana, 5th Dec. 1894.

Hosp. Asst. Mahomed Hussein received charge of the Civil Hosp., Muscat, 21st Dec. 1894.

Hosp. Asst. Hari Shriniswas Bichu, placed on genl. duty, Sholapur, 7th Dec. 1894.

CENTRAL PROVINCES GOVERNMENT.

Civil Hosp. Asst. Gokal Pershad, who was under suspension, to do duty under orders of the Civil Surgn., Jubbulpore, 27th Dec. 1894.

Three months' priv. leave is granted to Civil Hosp. Asst. Muridhar, of Umrer Branch Dispy., Nagpur Dist., 20th Jan'y. Civil Hosp. Asst. Gokal Pershad, doing duty under orders of the Civil Surgn., Jubbulpore, is temply. apptd. to the Umrer Branch Dispy., Nagpur Dist., *vice* Civil Hosp. Asst. Muridhar.

Three months' priv. leave is granted to Civil Hosp. Asst. Sheikh Mahomed Ramzan, of the Pandhana Branch Dispy., Nimar Dist.

Civil Hosp. Asst. Ramkrishna Palkaji, doing duty under orders of the Civil Surgn., Nimar, is temply. apptd. to the Pandhana Branch Dispy., *vice* Civil Hosp. Asst. Sheikh Mahomed Ramzan.

Civil Hosp. Asst. Wali Mahomed, of the Arang Branch Dispy., Raipur Dist., is deputed on special duty to the Raipur Fair.

Civil Hosp. Asst. Mahomed Zahurul Huq, doing duty under orders of the Civil Surgn., Raipur, is temply. apptd. to the Arang Branch Dispy., *vice* Civil Hosp. Asst. Wali Mahomed.

Civil Hosp. Asst. Bhondoo Lal, doing duty under orders of the Civil Surgn., Jubbulpore, is directed to do duty under orders of the Civil Surgn., Saugor, for special duty at the Garhakota Fair.

BURMA GOVERNMENT.

Asst. Surgn. F. Bradley assumed charge of the Civil Surgency, at Tiddim, Chin Hills, 5th Jan'y.

Hosp. Asst. P. Raman Menon made over, and Hosp. Asst. A. Jegannatha Pillay assumed, as an additional duty, charge of the Civil Dispy., Bawan, Chin Hills, 24th Dec. 1894.

Hosp. Asst. C. Rookasawmy Chetty left Civil Dispy., Maymyo, Mandalay Dist., and assumed charge of the Police Hosp., Lashio, Northern Shan States, 31st Dec. 1894.

Hosp. Asst. Koilas Chander Palit left Police Hosp., Bhamo, and assumed med. charge of the No. 1. South-East Escort at Bhamo, 13th Jan'y.

G. O. C. C.

Surgn. Lieut. J. N. Macleod, M.B. offg. in med. charge of the 19th Bengal Lancers, to office, as Surgn., on His Excellency's Personal Staff. *vice* Surgn.-Maj. Trehasne, on leave, 1st Dec. 1894.

Surgn.-Capt. E. Wilkinson, leave for three months, (m.c.) Asst. Surgn. Guilford Thoy, I. M. S. is granted three months' leave on med. certificate.

The undermentioned Native Military pupil Thakur Singh having passed his final exam. is admitted into the service as Sub-Hosp. Asst., 15th Oct. 1894.

Surgn. Lieut. E. B. Parry, from the offg. med. charge of the 44th Gurkha Rifles, to the offg. charge of the 42nd Gurkha Rifles, *vice* Surgn.-Capt. H. S. Wood, who exchanges to the 44th Gurkha Rifles.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Re. 1, for subscribers, and Rs. 2, for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

CASSIDY.—On the 24th Feb. at Purneah, the wife of Surgn.-Capt. C. Clemons Cassidy, of a son.

HOLT.—On 24th Jan., at Jansl, N.-W. P., the wife of Surgn.-Lieut. R. H. L. Holt, Army Medical Staff, of a son.

BICKETTS.—On 6th Feb., at St. Lawrence Vicarage, Reading, Berkshire, England, the wife of Surgn.-Capt. W. S. P. Bicketts, L. M. S., 17th Bom. Infy., of a daughter.

DEATHS.

BENSON.—On the 4th Feb., at Mysore, Mary Eden, wife of Surgeon-Lieut.-Colonel P. H. Benson.

GALLAGHER.—On 9th Feb., at Byculla, Bombay, from heart disease, Harold St. Vincent, the dearly loved son of J. Gallagher, House-Surgeon, J. J. Hospital, aged 9 years and 3 months.

SCROGGIE.—On 30th Jan., at Bombay, Elsie Indira, daughter of W. R. Scroggie, Civil Surgeon, Sholapur, aged 6 years.

NOTICES TO CORRESPONDENTS.

Waziristan.—We fear your letter would stir up race feeling. Your position is strong, and ranting cannot hurt you.

A. L. M. (Jalpaiguri).—Appeal to the Vice-Chancellor of the Calcutta University. We think your case, if clearly put, would bring about the desired end. With an Indian degree you may appear at the examinations of any of the British Corporations and be exempt from all but a test in the senior subjects alone. A six months' stay and 3,000 rupees will cover all your needs.

W. H. (Dagshai).—The Provident Fund question receives notice in this issue.

G. W. B. (Bhusawal).—Your medical certificate is perfectly lawful. Tell the office in question you are prepared to submit the legality of the matter to the Indian Government.

J. W. P. (Ganjam).—No general order has yet been issued cancelling the decision of the Secretary of State for India.

R. S. (Agra).—Surgeon-Captain Wade in your city is the Secretary of the Warrant Medical Officers' Provident Fund. Apply to him for a copy of the rules.

S. A. R. (Berberu).—Dr. R. H. Elliot, Presidency College, Madras will, we are sure, be glad to receive the report of your case of snake-bite together with the pickled snake, and we would have much pleasure in receiving Dr. Elliot's opinion on the case.

A. A. R. (Lucknow).—If you are a member of the Association, please send in a full statement of your case to the Secretary of the Association, and it will be laid before the Council.

V. C. M. (Bellary).—The matter as you say is still under consideration. The subject of house-rent for Civil Hospital Assistants is referred to in this number.

F. J. (Lahore).—We trust the correction made in this issue will give you satisfaction.

A disgusted ex-medico (Bombay).—The points you refer to are extremely regrettable. The machinery of reform has been set in motion to some good purpose. Let us hope that in a short time things will much improve.

Referee.—Copy of the index is sent to every subscriber for binding purposes.

P. C. D. G. (Kishoregunge), R. C. (Benares), C. A. T. (Tellicherry), A. L. (Mandalay), A. V. M. K. (Bombay), H. G. (Mussorie), T. H. A. (Gadag), R. K. (Amritsar).—Are all thanked. Their communication will appear in early issues.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjina Tibabat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Scalpel—Indian Journal of Pharmacy.

Gazettes of the Governments of India, N.-W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondent—M. S. Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planters' Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine—Medical Missions.

Books.—*The Enlargement of the Prostate: its treatment and radical cure.* By C. W. Mansell Moullin, M.A., M.D. (Publisher: H. K. Lewis, 186, Gower St., London W. C.).

Essentials of the Diseases of the Ear, arranged in form of Questions and Answers prepared especially for students of Medical and Post-Graduate Students. By E. B. Gleason, M.D. (Publisher: W. B. Saunders, 925, Walnut St., Philadelphia).

The Dyspepsia of Phthisis: its varieties and treatment including a description of certain forms of Dyspepsia associated with the Tubercular Diathesis. By W. Sollen Fenwick, M.D., B.S. (Publisher: H. K. Lewis, 186, Gower St., London W. C.).

Literary Contributions and Letters from: Surgn.-Lieut. Col. W. G. King, M.D., Madras; Lieut. Col. T. H. Hendley, C.I.E., Jeypur; Asst. Surgeon, Kashmir; Surgn.-Capt. J. F. Evans, M.D., Calcutta; Asst. Surgn. Chuni Lal Bose, M.B., F.C.S., Calcutta; Surgn.-Capt. Patrick Hehir, M.D., F.R.S.E., F.R.O.S.E.; Hyderabad: Roger G. S. Chew, M.D., C.M., M.Sc., Calcutta; Asst. Medical Dallas, L.M., Dub., L.R.C.P., Kashmir; Surgn.-Lieut. Robert Henry Elliot, M.B. (Lond.) F.R.C.S. (Eng.), Madras; Asst. Surgn. Gunga Govinda Sarkar, L.M.S., Madras; T. N. Mudaliar, C. H. A., Madras; Asst. Surgn. F. D. Pant, Oudh; Asst. Surgn. A. Beale, Rangoon and others.

Original Articles.

GYNÆCOLOGY AND PÆDIATRICS IN INDIA.

By SURGEON-MAJOR H. PETERS DIMMOCK, I. M. S.,
Professor of Midwifery, &c., Grant Medical College,
Bombay.

BEING THE PRESIDENTIAL ADDRESS IN THE SECTION
OF MIDWIFERY AND DISEASES OF WOMEN AND
CHILDREN AT THE INDIAN MEDICAL CONGRESS.

It is my especial privilege on this auspicious occasion of the first Medical Congress in India to open the proceedings of the section in obstetrics, and the allied subjects of gynæcology and pædiatrics, and it is a privilege which I feel to be one of great distinction and honor to that degree, that I have had some difficulty in the selection of a train of ideas, suited to such a wide-reaching object as our meeting to-day must be—wide-reaching not alone in the sphere of Indian medical science, but also in the consideration of the eagle-eyed public that now watches with ever-increasing interest, proceedings and intentions that bear upon the physical weal and hygienic progress of the people of this Eastern Empire. It is matter for congratulation and joy, that not only the men of India have awakened to the enormous benefit to humanity that skill in these particular branches of Medical Science will convey through the alleviation of pain and suffering and the ensurance of a higher standard of future maturity, but that also the women of India are speedily recognising and adopting the benefits that accrue to them thereby in their hours of difficult travail, in the rearing and healthy management of their children, and in the treatment of the particular ills to which they are so often the unfortunate heiresses.

This happy consummation of philanthropic hopes, this cutting of the gordian knot of the conservatism of custom, has been furthered by the humane sympathy and loving benevolence of the COUNTESS OF DUFFERIN, whose name will be handed down to posterity, particularly in India, as a benefactress of womankind, while her scheme for help thus inaugurated has been and will be still more promoted by the intelligent appreciation and assistance with which the more enlightened men of India have sought and encouraged the bringing of skilled aid to their wives and children into the secluded precincts of the zenana. This ready adoption of means for the relief of such suffering within so short a space of time promises great impetus to the advance of knowledge in the subjects of this section, of which India stands so much in need, and which has from centuries immemorial languished in the most deplorable depths of ignorance and superstition under the peculiar prohibitive customs of the people of the land, and the uncouth and repulsive traditional methods of the native midwives.

As this new light is spread amongst the people by the medical men and women pioneers of our art, we may look forward to a fulfilment of the results of higher knowledge and skill as well as to an appreciation of those efforts that can not only relieve the acutest suffering, but can so often crown the hopes of a happy family.

In our particular corner of the world's work it is our beholden duty—and I am sure it is with most of us our enthusiastic pleasure—to strain our intellects to add to the knowledge that will help on, enlighten, and inspire our fellow-workers; and we should remember that even a little good work done and recorded often goes to the piecing together of a great discovery. The geniuses of every generation who have been led to the exposition of some great truth have mostly gained intuition, aid, and inspiration from the labors of others, past and present, and have based on them their observations and conclusions.

It has been their particular gift to unite these fragments into the whole and to gather the facts of knowledge thus previously worked out, often in an apparently insignificant degree, further adding the requirements that constitute the full evolution of the master mind, and placing them together in the progressive steps of entire and true completion.

So let us ever be certain that as we glean the stray cornstalks in the field of experience, it is in our hands to furnish material for the skilled laborer to bind into goodly sheaves. In searching for a fit subject for this address, it seemed to me better to select matter of some unique interest than to generalise in the many attractive ideas that such a meeting as this would be sure to call up. Indeed, these particular branches of medical art have not progressed in India in anything like the way that general medicine and surgery have done, owing to circumstances to which I have already referred, as well as to the unwillingness of Indian women to enter hospitals, to undergo operations, and to submit themselves or their children to treatment at the hands of male practitioners, and to have given a review of the advances made in these subjects in India would have been a somewhat barren task. One can point to the works of TILT, BIRCH, JOUBERT, and a few scattered records in the various ephemeral Indian medical journals that have brightened the dim history of the labors of the last 50 years, but there has been no attempt to systematise or to establish a permanent literary interest in these branches, such as is the case in the countries of Europe. The second generation of Indian medical practitioners has reached maturity, and still these important subjects are in their infancy with us. There are many parts of them in which we require full and accurate information of special application in India.

In obstetrics it is self-evident to anyone with a modicum of experience that on account of the great variance in the measurements of the pelvis and the development of the child in the different races, the whole gamut of operative manipulations must differ greatly, and such a consideration alone would demand an entire text-book of careful collaborative experience.

A wider knowledge of diseases occurring particularly in women in various parts of the country, with methods of treatment and the results of operation, is much to be desired.

The diseases of Indian children are comparatively an unopened subject, and promise a novel, instructive and extensive sphere of most useful enquiry to those who have the opportunities and advantages, and will take the trouble to record experience in them.

It is time that we awoke from our lethargy. May our meeting of to-day be a trumpet call to workers throughout India for further re-advance all along the line of these particular subjects, and perhaps a suggestion for the foundation of an Indian obstetrical society, similar to the London one, may not fall amiss in this enlightened city, where the torch of progress has been uplifted to light the way of encouragement to a mutual interchange of thought and life.

Posterity demands it as a duty, and women doctors, especially with their many advantages, must not forget that it is our obligation to add to accurate knowledge as well as to relieve suffering.

Now as my mind has for a time been much occupied with some stiff problems in puerperal fever, I decided with diffidence to attempt to record the still imperfect, but extremely interesting, solutions that certain such cases have presented to me.

Since Professor SEMMELWEISS first placed us in possession of the axioms of puerperal fever, there has been accumulated a mass of evidence to demonstrate their truths, and fresh knowledge has been added to them, especially by the discovery of the antiseptic system of LISTER.

But though the ideas of all authorities are fairly well defined, there are still many effects and conditions of puerperal fever and points of difference that are hard to reconcile. This is especially the case in a country like India, which teems with forms of pyrexial diseases that are liable to complicate the pregnant and puerperal states. To indicate all forms of puerperal fever as puerperal septicæmia, whatever the infective cause, and however much the symptoms may vary, is alone sufficiently confusing, when we are brought face to face with their actual protean clinical facts: and, on the other hand, to seek to differentiate each and every kind of puerperal fever according to its features, whether of cause or effect, would lead us into an interminable phraseology that would be too awkward for any practical purpose.

The old familiar term "puerperal fever" as a main distinctive indication is rendered sufficient for all purposes by the affix of a descriptive adjective for the special condition or cause associated with the pyrexia of the puerperium, which after all is the generic meaning of puerperal fever. Thus the words traumatic, septicæmic and pyæmic puerperal fever, would describe fairly well the form of puerperal pyrexia that was associated with traumatism, septicæmia, or pyæmia. Any local effects can, at the same time, be described as complications, and we should thus have a designation like 'traumatic puerperal fever with pyometritis,' and so on.

To eliminate the special characters and peculiarities of these and other complex puerperal fevers, we require a very extensive knowledge of their clinical features, and in India we are confronted with so many kinds of the fever type of disease, that such an enquiry is sure to be full of immensely interesting and intricate possibilities. Clinical observation and deductions therefrom are always most attractive, and have been naturally the principal methods of elucidation of disease throughout all time of medical knowledge. They demand the first attention of the physician, and now-a-days, waited on by pathology and its

youthful hand-maid bacteriology, they are yielding most fruitful results. In these rapidly progressive days we are continually on the outlook for some fresh means of divining the actual causes and conditions of disease, and those occurring in the pregnant state and the puerperium are so environed by their own peculiar accompaniments that there is a separate and special field for the study of them, both clinically and pathologically. In a research into the causes and effects of puerperal fever in India we are confronted, not alone with especial disease entities, but also with the many conditions peculiar to the country itself—of season and meteorological events, of race, of surroundings, of habits, of inter-current disease, and of the preliminary effects of the pregnant state under such conditions, in all of which I can only suggest what a large field there is for philosophical, thoughtful, scientific and useful enquiry, especially to those members of the profession who actually practice amongst the people, and are intimate by race association with their modes of life and other influences.

In this there must be no quackery. "Quackery gives birth to nothing: gives death to all things. We shall not see into the true heart of anything, if we look merely at the quackeries of it: as mere diseases, corruptions with which our and all men's sole duty is to have done with them, to sweep them out of our thoughts as out of our practice. Man everywhere is the born enemy of lies."

In a tropical climate the main influence would, of course, be that of the high temperature of the air, by which all developments and changes are brought about with a greater rapidity, so that the tissues become less stable, less hardy, and so tend to disintegrate quickly, when once a rift is opened in their continuity.

The extreme changes of intense dry stimulating heat in the summer and of a depressing heat that come with the onset of the monsoons, present aspects of variation, apart even from acclimatisation, in the organisms of all who are subject to them, and still more of those whose temperaments are liable to an easy divarication of the physiological equilibrium either towards depression or exaltation. In the pregnant woman we have to consider that there is a call upon vascular, secretory, and excretory powers which react to such influences in accordance with the elastic requirements of each and every functional tension. Dry heat stimulates the circulation, raises the tension of the nervous system, excites greater metabolism, and, if the organism is in any way over balanced, revenges itself for the disorder of its dominant systems by a furious hyperpyrexia confusion of its general processes. On the other hand, moist heat depresses the circulation, lowers the nervous tone, impairs secretion, and further promotes an accumulation of effete substances in the blood either slowly or rapidly, so that morbid effects are easily engendered and with difficulty thrown off. So, too, meteorological changes exert their action in corresponding effects. As examples of the differences of disease types under such circumstances may be taken the sharp attacks of fever which occur in the drier seasons of the year, and the low forms of continued fever and insidious cachexia with engorgement of the abdominal viscera, especially of the spleen, such as take place in humid states of the atmosphere and climates.

Frequently the slow development of malarious cachexia produces in the pregnant woman a form of pernicious malarious anaemia, which is characterised towards the end by intense anaemia, oedema, and an enlarged spleen and liver, for the sluggish circulation and nervous debility encourage congestion of the organs.

Race may shew its influence in the various tendencies that are developed out of evolutionary characteristics, as for instance the neurotic type rendering the woman more susceptible of nervous impressions and reactions, often altering the characters of disease by super-added nervous phenomena, such as high temperature quickly subsiding. Habits of food, of drink, and of luxury are worthy of reflective consideration, and it may be accepted as a fact that pregnant women, whose food is of a vegetable and unstimulating kind, will, have less stamina in enduring prolonged pain and exhaustion, but will recover more quickly from ordinary trials, than those whose food is of a more generous description, while again the latter will be more liable to inflammatory reactions and rapid tissue changes, such as sloughing from traumatic injury.

The surroundings of pregnant and puerperal women are manifold in their effects, and include those of the room, the house, the village, and the town, septicæmic, zymotic, and malarious puerperal fevers being the most likely outcome of dangers from these sources.

I have had the usual experience of most enquirers in being baffled at the outset by forms of puerperal fever that I have had to deal with in India, and what impressed me most in the first instance with some of the cases was their unusual and surprising resistance to rigid antiseptic and aseptic precautions. A study of a series of temperature charts, and the effects of various treatment on the temperature, gave the true line of explanation. When once the clue was given, the opening of some of the hidden processes was shewn, so that I venture to tabulate certain forms of complex puerperal fever as follows:—

1. Malarious intermittent puerperal fevers.

(L) Quotidian.

(B) Tertian.

(Y) Quartan.

2. Malarious remittent puerperal fevers.

3. Thermic do. do.

4. Dysenteric do. do.

5. Syphilitic do. do.

I have no doubt that others will be added to their numbers as the science of medicine progresses, and wrests from the chaos of uncertainty the many forms of Indian fevers.

The protozoic causes of these fevers may develop in the pre-pregnant or the pregnant state, and be carried on into the puerperal state to be further impressed with a septicæmic pyrexial element, which is the result of the condition of the tissues and systems of the puerperal patient rendering the unusual secretions and excretions more liable to the action of infective agents. Or these causes may be latent in the system, manifesting no symptoms until they are excited to action by the onset of labor, or roused to a more powerful influence by a septicæmic pyrexia.

To deal with the group of the malarious forms of puerperal fever I submit cases with their accompanying charts. Many of you may be familiar with an experience that pregnant patients in this country who contract malarious fever, or whose systems are inoculated with its organism, are very resistant to treatment for malarious fever or cachexia; either because the blood and tissues of the pregnant woman are very retentive or reproductive of the disease factors, or because they are specially vulnerable to and ineffective in repelling their ravages. How often it happens that a pregnant woman suffering from malarious fever is treated by all the known methods, which produce no yielding of the fever for some time, and when the pyrexia runs high, miscarriage is sooner or later brought about. The quinine may here be wrongly blamed for the mishap, which was in reality due to the ever-heated blood current and to the poisons circulating in it, and I have elsewhere protested against this shibboleth of the objection to use quinine in doses that are adequate for the control of the disease. At the same time we must not forget that sometimes malarious fever is not affected by quinine, and that the system may also be inoculated with previous treatment by that drug, so that it fails to give the expected result.

It may be some days even before an ordinary attack of ague in a pregnant woman can be controlled, and if the case is allowed to go on without treatment, the disease gets such a grip of the patient as to be uncontrollable, and if labour or miscarriage results, an additional puerperal septicæmia is an inevitable result.

We are also all familiar with the sudden appearance of malarious fever coincident with a severe shock to the system, such as a fracture of a bone, the passage of a catheter, or an overwhelming emotion, and recollecting that the dilatation of the os uteri is often accompanied by a rigor, I have attributed the sudden accession of a high temperature at the commencement of labor to a disturbance of latent malarious poison by the vascular, nervous, and tissue changes wrought by the mechanical process of dilatation.

It is difficult to account in any other way for the sudden appearance of these fevers at such crises, when they have not been preceded by any signs of a taint lurking in the body, and I believe that the organisms are really latent, and that their sudden activity is because the balance of nervous control is disturbed by the event of labor, the vitality of the cells and leucocytes are diminished, and their ranks are thereby thrown open to the invaders, because the reflex irritation to the nervous centres causes through the trophic nerves changes in the metabolism of the body, and through the sympathetic nerves changes in the circulation, which facilitate such morbid processes. It is the same with malarious fevers that develop after labor in association apparently with the stimulus to the plasmodia of slight or severe puerperal septicæmic pyrexia, and in these instances the puerperal fever will be established with the thread of malarious fever running through it and giving a distinctive character to the temperature record, for the treatment of which complex condition it is necessary to combine methods applicable to both the diseases.

Further, whenever malarial fever is developed in the puerpera, there is a liability to what may be called an *exogenous* form of septicæmia as a result of the high temperature of the malarial fever, for the lochial secretions decompose rapidly within the genital cavity, and their poisons are absorbed into the system, so as to produce the usual septicæmic effects in addition to those of the malaria, and thus to cause a continuance of pyrexia during the intervals that would be remissions of the malarial fever, and to exaggerate the high temperature of the pyrexial stage of the malarious attack. Very high and alarming temperatures are developed in this way.

Again, puerperal women who have malarial cachexia may have progressed favorably even beyond the first week, when they expose themselves to a chill, and this is followed by the typical phases of the rigor, of the pyrexia and sweating stages of ague. The lochia become offensive, the temperature is continuously high, and there is an intermittent recurrence of the ague and increased pyrexia. It takes several, sometimes many, days before recovery is brought about, while if proper measures are not adopted, the case may end fatally.

In all these cases, associated with malaria of whatever kind, we have not only general effects to deal with, but also those local effects that are inevitably associated with the traumatism of labor. The lowered vitality of the tissues makes them very prone to take on a sloughing or even gangrenous character, and such conditions are not only resistant to repair, and will heal slowly, but add a further and serious danger to the case from a multiplication of poisonous agents. If no treatment of the constitutional state is adopted, their ravages will increase to a terrible extent, so that I have seen cases of malarious cachexia in the puerpera where the genital passages have been in a gangrenous state throughout their whole area, consequently when artificial traumatism is produced by the use of instruments, particular precautions are necessary to guard against such effects, and although there may be no apparent symptoms, most rigid attention should be paid to the local antiseptic treatment. Another effect of malarious cachexia and of malarious fever during pregnancy is to cause a placentitis from which the placenta becomes adherent, and so adds a further danger to the case at labor time. The shock of manual detachment may set up the pyrexia of malaria, or there may be infection from without by the operation. Such patients often complain of excessive tenderness over the uterus during pregnancy, which is no doubt due to the inflammation that is going on. Another effect of malaria in the puerperium is to produce intense neuralgia of some of the sexual organs. It may be the uterus that is thus affected, in which case it is probably caused by some inflammation of the nerve filaments communicated from a placentitis, or an actual primary neuritis of malarial origin, and the patient may suffer great pain, especially in connection with the after-pains. I have found the uterus in these patients to be excessively tender, and the condition has mostly yielded at once to quinine and anti-neuralgic drugs. I can recall one case of acute neuralgia of the ovary which followed a miscarriage. The patient did well in all respects, except that at a regular hour every afternoon she suffered from acute agonising

pain in the left ovarian region. It yielded at once to large doses of quinine.

Post partum hæmorrhage is also very likely to occur, mostly from the effects of the placentitis, but also in consequence of the state of the blood, of lightened blood pressure, and of the defective contractile power of the uterine muscular tissue.

Diarrhœa is a frequent occurrence, and is of great importance. In all conditions of health or disease in people living in India, whether native or acclimatised, there is a primary climatic potentiality towards diarrhœa. A chill, an irritant, or disease are likely to be accompanied by it in ordinary individuals, and in puerperal fever, particularly, this natural tendency is exaggerated by the secondary morbid and derivative tendency of the system to relieve itself of the toxæmia through the mucous membrane of the intestines. Accordingly, the usual dose of castor-oil will frequently start a severe diarrhœa and sometimes almost choleric symptoms are caused by what seems a slight cause. Rheumatism is an occasional complication; the connection between rheumatism and malaria is outside the present subject, so I will not discuss it.

Mania is also a not infrequent sequel, and has partly to do with the state of health and partly with the high temperature. The higher the temperature, the more likely are the psychological centres of the brain to be injured, and disorders connected with them to follow.

The fœtus is, as a rule, not particularly affected, except in nutrition, and so suffers from fever at birth only in occasional cases, and this is probably due to the resistant and destructive power of the placental structures which thus guard the entry of the fetal area from deleterious matters. A similar result occurs in some cases of syphilis contracted during pregnancy.

"To use too many circumstances, ere one comes to the matter is wearisome, to use none at all, is blunt," and I venture therefore to place the following cases before you to illustrate the circumstances which I have already reviewed. Copies 25-28.

Case 1.—Malarious intermittent puerperal fever.

Gaya, a Hindu Brahmin, I para, aged 20, was admitted for slight fever on the 25th June 1892. Confined on the 29th June. Rise of temperature on the second day of the puerperium, which soon developed an apical periodic character. No marked rigors. Antiseptic treatment, and antipyrin were at first tried. On the 8th day quinine sulph., grs. xv., and the motions became frequent and dysenteric in character, while six round worms were passed. The round worms probably helped to set up irritation in conjunction with the other symptoms. The temperature also fell for a short time, but again rose the next day. Eucalyptus was then given internally, but with no appreciable effect, and quinine was again given by the mouth and the enteritis symptoms increased. Quinine was therefore given hypodermically with a gradual and satisfactory improvement. There was another slight rise on the 30th day of the puerperium, which also yielded to quinine injections, and the patient was discharged well on the 4th August. This chart shows well the persistence of the puerperal fever when accompanied by malarial complication and vice versa, fairly regular intermittence, the

irritative effect of the round worms under conditions of disease, and the instant action of quinine by the mouth. So the hypodermic injections were resorted to. As strict antiseptic precautions were adopted, the chart also shows that unless the malarial fever is overcome, antiseptic precautions will not check the puerperal fever, which receives a continual fresh impulse from the malarial pyrexia.

Case 2.—Mild puerperal fever and malarious cachexia.

Two hourly chart.

Jai Babaji, Hindu, 9 para., age 40, admitted on the 25th.

The waters had escaped and the os was fully dilated on admission. The patient stated that she had been in labor for three days and that pains had been severe. Second stage prolonged, presentation vertex, 2nd. The placenta was adherent and had to be removed by manual detachment. The case has the following peculiarities—some degree of traumatism from prolonged labor, and artificial interference at third stage, a consequent mild septicism and traumatic fever, and malarious intermittent fever with offensive lochia.

On the 1st and 2nd days of the puerperium there was slight feverishness. On the 3rd and 4th day marked fever. On the 5th day a sudden and acute rise of temperature of septic origin probably. This started the malarious organisms into active influence, and a daily intermittent temperature followed.

Quinine was not administered until the 8th day, and controlled the fever for a day or two. The lochia still continued somewhat offensive, and the fever recurred on the 12th, 13th, 14th and 16th days. The quinine was steadily continued and arsenic was given on the 17th day. The patient was also treated with antiseptic uterine irrigations, ice-bag over the hypogastrium and uterine oxytocics, and this local treatment no doubt controlled the effects of slight septicism and traumatism. The quinine controlled the malarious fever well at first, but did not prevent recurrence. The effects were, however, aided by the arsenic, for the fever would otherwise have recurred after the 19th day, and the patient recovered completely. Without the antiseptic and antipyretic local treatment, the fever would have developed to a more serious degree, and quinine alone would not have had much influence on its course. At the same time, I believe larger doses of quinine, or hypodermic injections would have cured it quicker.

Case 3.—Puerperal and quartan intermittent fever.

Mrs. C, aged 36, European, 8 para., was admitted for puerperal fever. She had been confined 12 days before admission, and forceps had been used for inertia. The patient had been suffering for some time from mitral regurgitation, and there was a good deal of oedema and anæmia associated with the pregnancy. She had also been residing in a malarious district, and had fever frequently; the fever developed on the 3rd day of the puerperium, had been high, still fairly continuous, and on some days had been much more severe than on others. As the patient's condition was desperate, she was brought to hospital. On admission she was in a very dangerous state, delirious with much dyspnoea and distress, and high fever. The treatment was at first directed to measures for reducing the fever, and the local puerperal congestion by an icebag to the hypogastrium and to the head, and vaginal douches,

ice pack, &c. The day after admission the temperature went up to 106°, and the patient's condition was most grave, her breathing being stertorous, at the time of the highest rise, and she was cyanosed. On the 15th day the temperature went down and the patient seemed much better, but on the 18th day it again rose to 106°, so that the chart gives the indication of a quartan type of fever. This second high temperature wave is accompanied by a rise of the pulse and respiration, which shew increased exhaustion and dyspnoea. Quinine, arsenic, and digitalis effected a cure. The slight rise of temperature of the 25th was transitory, and did not recur.

Case 3 A.—This is supplementary to No. 3.

Mungula Govind, Hindu, para., aged 24 years, admitted 31st August 1894, suffering from anæmia, oedema, and ascites and in great distress. She was pregnant about six months. The liver was much enlarged, and so also were the glands of the neck, and there was a rise of temperature every evening. The patient improved much under treatment, principally of arsenic and quinine, and was confined on the 12th November 1894, labor being normal. The chart shews slight septicæmia from the 4th to the 11th day of the puerperium, which apparently yielded to antiseptic treatment, but was followed on the 12th day and afterwards by an intermittent tertian fever, which did not yield to quinine by the mouth. When quinine was given hypodermically and Liq. arsenicalis also prescribed, the patient had two deferred attacks of fever and then recovered.

Case 4.—Puerperal remittent fever.

Daice Lalce, aged 35, Hindu, 6 para., admitted into hospital for fever. Temperature on admission 103° F. Pregnant at full term, and evidently much distressed. She had suffered from fever during pregnancy, but more especially during the last ten days. She complained of uterine pains. On the morning of the 3rd day after admission the pains became more severe, and she was confined the same day, the temperature being persistently high throughout labor. The notable points in the chart are as follows: The sudden fall of temperature on the 2nd day after the quinine grs. v. sub-cutaneously. The fall was very marked, and the temperature rose again on the 3rd day to a very high degree after a rigor and remained high. The rigor probably indicated dilatation of the os. After confinement on the 4th day after admission, there was a very alarming fall of temperature after the administration of sodii salicylatis during the fever and quinine sulph. grs. xv. no doubt due to the drugs, to exhaustion after labor, and to the usual fall of a temperature of the remittent type.

After this day of considerable danger a condition of puerperal remittent fever was apparently established, and influenced here and there by the treatment. The effect of sodii salicylatis in depressing the temperature and vitality is marked and peculiar. The patient developed meningeal symptoms on the 25th day of the disease, to which she rapidly succumbed. Previous to this date, I think the chart shews that the fever was greatly controlled by the quinine given hypodermically. In spite of the severity of the case, the fever line does not range high during the last week, and the case might have progressed more favorably if the patient had not been exhausted by neglect and want of proper attendance before admission.

The treatment of these malarious puerperal fevers has been frequently shown in the clinical memoranda. It consists mainly of unusually thorough antiseptic measures for the genital passages and uterine cavity, of general and local antipyretic agents, i.e. in various ways being particularly useful, and of internal antiseptics, while the malaria must be controlled by its specific drugs, quinine, arsenic, &c.

In desperate cases of hyperpyrexia, the ice pack and the immersion tank are of signal service.

The method of administration of quinine has received particular attention, and I was so disappointed with it when given by the mouth, that I have almost abandoned it entirely. It is certainly of no use, except in large doses, but in puerperal septicaemia, I have pointed out that there is a potential irritability of the intestines which is likely to result in diarrhoea, and these large doses of quinine have invariably been followed by diarrhoea and even by enteritis, and if there is diarrhoea already present when the quinine is given, the drug may increase it so that even severe collapse may follow. No one can doubt that quinine is an irritant to a certain extent to the digestive tract, for it will often cause dyspepsia, urticaria, gastrodynia and other symptoms of this kind. I therefore give it in large doses of 5 grains or 10 grains subcutaneously, and if the latter amount, it is well to have a couple of syringes charged with the solution to save time. The injections of course not being made too close together. This effect is seen in case No. 1 in which quinine was given by the mouth on the 8th day and was followed by symptoms of enteritis. It had no effect on the fever, and probably there was not much absorption of the drug. When quinine was pushed hypodermically, the patient improved. The quinine does not exert an antipyretic influence to any great degree in these subcutaneous doses, but is probably more antiseptic and antiperiodic in its action.

The next series of puerperal fevers is that of the dysenteric form, which arises in connection with true dysentery attack. The dysentery itself generally originates during pregnancy either at full term or earlier. In the former labor and in the latter case abortion or miscarriage is very likely to occur, and so we have a puerperal condition with the dangerous concomitant of very poisonous alvine discharges. Infection of the genital passages from these produces an extraordinary disease of the puerperal fever type.

Case 5.—Puerperal fever and acute malarious dysentery.

Yelloo, Hindu Kammy, resident of Parel, a malarious unhealthy suburb, was admitted into hospital on the 1st July 1892. Suffering from dysentery from which she had been ill for a fortnight. These facts were only elicited after she had been admitted into the general ward, and she was then isolated. Labor set in the day after admission, and was quickly over, the process being normal. Up to the time of labor, she had eight motions. They were scanty, containing a good deal of mucus. The progress of the case is indicated in an interesting manner by the chart, and I draw attention to the line of temperature record, which for the first six days does not range high. At the same time I think there was a faecal injection, for there

is during these days a distinct inclination to an apical temperature indicating slight puerperal fever. Also the number of motions increased greatly and undoubtedly exercised a derivative effect. On the 22nd day of disease, the 8th after admission, there was a sudden and high rise of temperature. This was the result partly of puerperal fever, but no doubt it was to a large extent due to the malarious taint of which the dysentery was a primary expression. There were irregular recurrences for the next three days, until the 26th, when Quinine Sulph. xx grains having been administered by the mouth, the number of motions increased and the patient was collapsed. The hypodermic treatment by quinine was at once resorted to, and the result was satisfactory. This case shews conclusively how irritating quinine administered by the mouth in large doses is in such cases. At the same time, unless the malarious taint is overcome, the case is sure to go from bad to worse, nor will the dysentery yield until the malaria is subdued. Evidently the hypodermic treatment is the mainstay of these peculiar cases.

Case 6.—Dysenteric infection and puerperal fever.

This is an extremely interesting case. It was coincident with the case of Yelloo, No. 5.

Mrs. W., Eurasian, 1. para. aged 23, admitted on the 24th June 1892 for pregnancy at full term. She had suffered somewhat from morning sickness, and had oedema of the lower extremities. Labor set in on 2nd July, the same day on which Yelloo No. 5 was confined, and they were in adjacent beds. Labor was tedious and forceps were applied. There was some laceration of the perineum. On the 3rd day of the puerperium, the patient was attacked with fever which soon assumed a peculiar character, the patient being in an unusually prostrate state, and the bowels shewing a tendency to enteritis. Antiseptic and other methods of treatment were adopted. On the 5th day diarrhoea set in, the motions shewing the character of muco-enteritis. On the 9th day as the diarrhoea had not been quite so bad, 20 grains Quinine Sulph. were administered by the mouth with the alarming result shewn on the chart. The diarrhoea became violent and uncontrollable, and the effects were choleric in their great intensity. After the patient had recovered somewhat, I began to give quinine subcutaneously and she recovered.

From these two cases, and from subsequent experience, I have observed that there is a particular form of puerperal fever associated with dysentery, the peculiarity of which is an increased tendency to elimination by the bowels which may go on to actual enteritis, and that the fever is allied to the malarious intermittent form of fever. Possibly the infective agents of dysentery and malarious fever are analogous. It is certain that the decomposing products in the intestines would predispose the system to an infection of this kind, but their actual absorption into the blood is necessary for the development of puerperal fever from them, and this is effected through the genital passages.

Dysentery itself is very obstinate in pregnant women, and there are no doubt turgescence of the mucous membranes and changes in the circulation which make the disease persistent. It is also desperately resistant to remedies, so that a dysentery of an acute form in a woman near the end of pregnancy is peculiarly dangerous in this

respect as well as from the further risk of exciting premature confinement and of following up its primary havoc by an infection of the system with the fecal toxins.

The most careful treatment often fails to prevent these consequences and sometimes, when the case has taken a favorable turn, it is liable to relapse. Much may be accomplished by repeated large doses of ipecacuanha, opiates, sedatives, antiseptics, internally and externally, and ipecacuanha is sometimes very well borne; so that I have been able to give 80 grains twice a day. No treatment is effective unless the food is absolutely unirritating, and peptonised milk and lime water is the only diet that serves the purpose.

I have included an example of another series of cases, those of the syphilitic, because I have found peculiar results in the puerperal state in women who are strongly tainted with the specific disease.

Case 7.—M. M. aged 20, Hindu, I. para, admitted in labor on 26th April 1894, and in consequence of a tedious 2nd stage, vertex. 2nd, was delivered by forceps on the morning of the 27th. There had been no complication of pregnancy, but the patient had appearances on her body which indicated syphilis. On admission the temperature was 102.5, and the pyrexia continued after delivery. The case was treated antiseptically for simple septicæmia, and somewhat improved, but again relapsed. On the 12th day of disease Pot. Iodid. and Pulv. Santoniu were given with a gradual improvement, but the patient still remained feeble and prostrate and in bad nutrition, until inunction of mercury was given on the 20th day of the puerperium. The improvement then was rapid and satisfactory, and the patient was discharged well on the 11th June.

This case suggests many questions.—Why puerperal fever should develop under such conditions, and whether it is puerperal fever,—whether it is a climatic effect on the syphilitic patient, whether the syphilis stirs up an irritative fever in the system—or does the syphilis render the body more susceptible of septicæmia, and the septicæmia more persistent than usual until specific remedies are used? In cases of puerperal fever of a continuous type associated with increasing cachexia, where the child shows also faint symptoms of congenital syphilis, it is always advisable to administer specific remedies. Of other forms of Indian puerperal fever the thermic is the one most frequently met with, and of course its main characteristic is intense and resistant hyperpyrexia. It is usually the sequel of pyrexia occurring before or during labor, although it may occur during the puerperal state, being most liable to happen on the 3rd day in connection with the usual slight fever which results from any infection or bacterial disturbances on that day. It may be associated with puerperal eclampsia, and cases of this kind that occur without albuminuria indicate an intense congestion of the meninges. Complex cases of puerperal fever in association with other diseases of the pyrexial type must sometimes occur, and again, I repeat, if practitioners can give time to clinical records, we may hope for more knowledge of them. Busy men cannot do this of themselves, I know, but with the help of skilled nurses they may gain much useful information, and I would wish to impress upon the profession and the public how necessary it is that there should be an encouragement to the training of nurses of all castes and creeds not alone for

good clinical work, but for the greater work of a more assured wrestling with disease. It has always been the rôle of the profession to teach the public what it requires for its health's sake, and if every medical man would insist on his bad cases being properly nursed, I am sure the public would soon come to recognise how indispensable such nursing is. On our side of India there is certainly an apathy on the part of the public to good nursing in serious private cases that threatens shipwreck to the support of such a scheme, which our nursing schools are trying hard to promote. Whether we are hospital physicians and surgeons, or whether we are in general practice if we are united, and earnest, if we are single-hearted and true to our noble calling in all these matters, we can each and every one of us strive to work for the general good in our own ways. In the selection of the evolutionary lines of our particular pursuits along this great scientific broadway of the most interesting, humane, and inspiring, though often most exacting of life-tasks, we have much to be proud of, to reward and to encourage us, and many good deeds to do. At the same time let us bear in mind

"Ne let the man ascribe it to his skill
That thorough grace hath gained the victory.
If any strength we have, it is to ill,
But all the good is God's, both power, and eke will."

—10—

CHOLERA AND QUARANTINE.

BY SURGEON CAPTAIN P. W. O'GORMAN, I. M. S.

Civil Surgeon, Madnapore.

"QUARANTINE" was originally derived from the Italian word *quaranta*, forty: meaning a forty days' detention or isolation for the prevention of spread of an epidemic disease. It has been defined as—"the enforced isolation of individuals and certain objects, coming whether by sea or by land, from the place where dangerous communicable disease is presumably or actually present, with a view of limiting the spread of the malady. The objects liable to quarantine include—on the assumption of their being apt to carry the contagion or infection of the disease—the luggage and personal effects of the individuals isolated, certain articles of merchandise and ships, and, inland quarantine, carriages and other vehicles. Sometimes entire communities and districts are subjected to quarantine. (HARRY LEACH and SHIRLEY MORPHY) * Ordinarily, the word *quarantine* is colloquially employed to designate any restrictive or detentive measures taken at frontiers or ports of entry, &c., to arrest contagion by land or sea. *Quarantine* may be divided into I *Maritime*, II *Land*. It may further, for practical purposes, be classified into—

(1). *Ancient Quarantine*.—Meaning the unconditional arrest and detention of all vessels or individuals arriving from any infected locality, until, within a minimum of 40 days or less, the presence or absence of the disease was proved by lapse of time.

(2). *Limited or rational quarantine*.—The examination conducted to ascertain the presence or absence of causes of communicable disease, without detention for more time than is necessary to the discovery and the destruction or removal of such causes.†

* Quain's Dictionary of Medicine: Article Quarantine.

† See Antiseptic Marine quarantine: Its theory and practice. Dr. Ashburn-Thompson, Government delegate, New South Wales; Trans. Inst. Cong. Hyg., London 1901, Vol. I, page 54.

(3). *Medical inspection.*—The medical inspection of vessels, railway trains, &c., or individuals coming from an infected locality without detention of "healthy" persons, vessels, &c. "*Infected ships*" &c. (with a case on board or with fresh cases during preceding seven days) are to submit to (a) disembarking and isolation of the sick; (b) the others to remain "under observation" not exceeding five days; and (c) disinfection of passenger's property as well as the ship, train, &c. (d) Emptying of water tanks and pumping out bilge-water after disinfection; and (e) delayed disembarkation of crew. "*Suspected ships, &c.*" (having had cases, but with none during the last seven days) are to submit to (a) medical inspection, (b) disinfection, (c) substitution of good drinking water for stored supply, and (d) pumping bilges dry; the last two before entering dock. In England the "observation" is carried out in the homes of the persons concerned, notification for same being conveyed to the local sanitary authority: pauper aliens and persons from infected ports, who are either filthy or unwholesome, are prohibited from landing. (Orders of Local Government Board, 6th September 1892).

The above is more or less the substance of the agreements drawn up by the International Conference on Cholera Quarantine at Dresden in 1893. Into the relative merits of each class there will be no need to enter. I shall confine myself to briefly offering a few suggestions on land quarantine, as we become acquainted with it in India in its particular application against the visitation of that much dreaded disease—Cholera.

In spite of the advancement of science, the propagation of cholera is still enigmatical—not to say mysterious. It is true we do not now regard the skies for portents and signs, but rather seek them on the earth. From staring at the astral heavens we have come to gaze on the firmament of pathology; and in lieu of viewing cosmic phenomena with telescopes, we bow our trembling heads above microscopes in awe of entirely new and unexpected comets. We have thus now come to regard atmospheric "waves" as mythical, and are asked to pin our faith on the "comma bacillus" of KOCH. But instances still arise to question the wisdom of such absolute dogmatic teachings. *Spe dixit pronunciamientos* cannot stifle enquiry or answer objections wherever legitimate, or if they suffocate them, it will be to the discouragement of science and to the postponement of accurate knowledge that is necessary for the suppression of epidemics, and thus for the advancement of the happiness of mankind. Now, one of the very mysterious things that puzzle the sanitarian is the periodical extraordinary and rapid progression into wide areas, from ordinarily localised or it may be isolated centres, of such diseases as influenza and cholera, in epidemic or still more pandemic form. Previous to the year 1817, cholera, though known apparently from the time of Hippocrates, was comparatively a mild disease, as the history of the Portuguese, French and old English settlers in India have shewn, and any epidemics that occurred were of a very localised character. India for centuries has been famous for her enormous gatherings of pilgrims at the several sacred shrines of Muttia, Benares, Jagannath and Hardwar; and yet we do not hear of epidemics. And although, besides this, the plains and mountains of Hindustan, Afghanistan and Persia have been the theatre

of perpetual war, and vast armies under terrible and plague inviting conditions, unknown now-a-days, have massed and traversed the land from end to end under Maharatta, Rajput, or Mahomedan conquerors, history appears to be absolutely silent as to any such terror-inspiring scourge as must have simply devastated or annihilated many of them had it occurred, and spread havoc far beyond the confines of India in their lines of communication. Cholera in its modern virulent epidemic form was therefore practically unknown until the 20th August of the year 1817, when it appears to have suddenly taken its rise in the Town of Jessore, 76 miles east of Calcutta, whence it rapidly spread (just as in later pandemics) westwards through Calcutta, up the Gangetic Valley, decimating the army of the Marquis of Hastings then operating against Scindia in Central India, and thereafter traversing, during the six years of its prevalence, half the civilized globe, including England. Since then six more cholera pandemics have ravaged the world. How did this first one arise? And why? And why should it sweep the earth as it did? And in days when human intercourse beyond India and between it and Europe was no better than it was before, or for many years after? Again, as Surgeon-Major DUKA, I. M. S., pointed out at Budapest, the other day; if human intercourse alone is the cause of spread, how do we explain the almost endemic and persistent prevalence of cholera near Paris in 1892, and its non-extension to England with every facility for its spread in that direction by sea traffic?

In the recent pandemic still progressing in Europe, can we say that the rapidity of spread can be satisfactorily accounted for by what we know of the life history of KOCH's bacillus? Its incubation, its rapidity of multiplication, and so on? And what are we then to think of those very numerous cases where the "comma bacillus" exists abundantly without producing cholera? And where cholera has been produced without its presence at all? Thus RUMPF in Hamburg, LESAGE and MACAIGNE of the Institut Pasteur, METSCHNIKOFF, LUBERSCH and others, are quoted as having proved that true Asiatic cholera occurs without the comma bacillus; and the negative experiments of PETENKOFFER, EMMERICH, STRICKER of Vienna, HARTERLICK and KLIN that the comma bacillus may be toxic but there is still no positive evidence that it produces cholera.* Klein has written a book† to prove this, and since then has shewn (*Indian Medical Gazette*, May 1893) that similar toxic symptoms are producible, and similar immunity imparted, by the typhoid bacillus of GAFFKEY and EBERTH, the bacillus coli communis and others. That choleraic symptoms are not solely characteristic of Asiatic cholera is, I presume, well-known. English cholera, and ptomaine poisoning from various causes (bad fruit, flesh, fish, rice and so on) are examples. In the year 1887, in Bristol, England, I attended a case with typical symptoms of cholera. I never saw stools more typical, and the only probable cause was unwholesome cheese. There was no cholera in Europe that year, and I regret I had not the opportunity of examining the cheese. Again, in May 1889, in Allahabad, a few hours after my assuming charge of the 13th B. L. I., I attended a native officer suffering from

* Presidential address, Tropical Diseases, Int. Cong. Hyg. 1891.

† The Bacteria in Asiatic Cholera, 1893.

typical cholera symptoms, cramps, thirst, suppressed urine, vomiting, rice water stools and collapse, &c., rapidly ending fatally, although the regiment had only a week before returned from their cholera camp, where they had been sent on account of cases having appeared among them. My suspicions were aroused and the *post-mortem* satisfied me that he had been poisoned with arsenic, and this the chemical examiner soon confirmed. This case suggests great watchfulness during times of epidemic scare, for I suspect such poisonings are more common than is usually believed.

Mr. ERNEST HART claims with great reason, to have established on an overwhelming basis of evidence, collected from every part of Europe, the dicta founded by SNOW and SIMON on the British epidemics of 1848 and 1854, and by himself and RADCLIFFE of the East End London epidemic of 1886:—

(1). That cholera is a filth disease carried by dirty people, to dirty places, and diffused by specially poisoned water.

(2). That you may eat cholera and drink cholera, but you can not catch cholera.

(3). That cholera may be considered for all practical purposes as an exclusively water carried disease, and that it is carried only by water poisoned by human discharges.*

Now these are factors that nobody can scarcely deny, the proofs being overwhelming. But yet though the truth, in my humble opinion, they are not the whole truth. Surgeon General J. M. CUNNINGHAM has traversed them and denied them. But I think that it is important to recognise that although cholera is in the vast majority of cases a "water borne," and communicable disease, yet it is *not always so—not invariably so*—instances to the contrary cannot, I think, be gainsaid.

DR. LANSON, Inspector-General of Hospitals, at the London Congress in 1891, drew attention to the fact that there are now no inconsiderable number of instances of well-marked epidemics having sprung up in limited localities at a long distance from where the disease was already prevailing and among persons who had not been absent from the locality for months, *without it having been possible for them to have had personal communication, either direct or indirect, with any one already affected*, and he instances the investigations by Dr. PARKIN at Southampton in 1856, by Mr. RADCLIFFE at Theydon Bois, Essex, in same year; by Board of Health in New Orleans in 1878; by Mr. FANNEL and Drs. BROUDEL, PROUST and others at Toulon and Marseilles in 1883. *In none of these was there any trace of communication by the sick or by families;† and Dr. LANSON concludes that "the efficient cause of the epidemic of malignant cholera can be conveyed to localities a great distance from where it is already prevailing, in sufficient quantity to generate an epidemic without being carried by man or families."*‡

Again at the recent International Congress at Budapest, Dr. OLSZOW, who has investigated this subject

* Cholera affluens and their suggestion: *Cont. British Institute of Public Health, Edinburgh, 2. N. J. 24 August 1891.*

† Thesis on the transmission of Cholera. Trans. Int. Cong. Hyg. 1891, Vol. 1, page 44, 45 seq.

‡ Thesis on the transmission of Cholera. Trans. Int. Cong. Hyg. 1891, Vol. 2, page 47.

in relation to Russia in particular, says: "After reading some scores of Russian reports and pamphlets and many articles in Russian medical journals, the impression left on my mind is that, so far as the recent epidemic in Russia is concerned, there were numerically more persons who contracted cholera by direct and unguarded intercourse with the sick than by means of drinking water, and that the poison of cholera was less often introduced into a new locality, and less often spread in that locality, by means of water than by persons suffering from the disease by careless contact of the healthy with the sick, and by articles that had been soiled by the dejects of the sick." But although he acknowledges water as the frequent cause of spread, he disclaims asserting that it will explain all that is obscure in connection with the disease. "It will not explain why cholera is one year confined to India and another year spreads to half the civilised globe. It cannot account for every village or town in which cholera occurs."§

Then again, until the year 1890 Influenza was unknown in India and before 1889 perhaps in Asia—What accounts for its origin, virulence and spread in pandemic form throughout India and indeed the world? Inter-communication alone cannot, although eminently communicable by air and water, for this was a great deal better during the Afghan war and yet we had neither influenza nor cholera. If the extra rapid multiplicity of the "bacillus" could account for it, what were the extraordinary favoring conditions? Meteorology apparently fails to answer? And yet in the domain of meteorology, and that of botany or zoology, will very probably be found solutions for many of these problems that at present alarm the ignorant and confound the wise.

We now return again to Quarantine and ask is it never advisable? The ultramontane anti-quarantine party contend that quarantine can never under any circumstances be justifiable, for the simple reason that cholera cannot be kept out of a country because it is communicable by, let us say, "aerial waves" (or aerial currents) which necessarily supersede and abort all such efforts of man; and that therefore our only refuge and hope lie in a good water supply and thorough sanitation. That there is enough ground for this contention I have already shewn. But that this is the whole unexpandible truth is open to question. I am no general upholder of rigid quarantine with its cordons and police, its dodges and evasions, its false sense of security and its neglect of hygiene and sanitation; but I decidedly incline to the opinion that under certain circumstances, a modified quarantine is often perfectly effectual in arresting the advance of disease, even into a sanitarily defective locality. Although this protection is not always evident, it yet occurs frequently enough to demand introduction wherever practicable. Such has been more or less the time worn practice in India, with our army, our cantonments, our jails, and our municipalities. And experience has not proved us false. This modified quarantine is by no means intended, nor in practice is it used, to supersede, hygiene and sanitation; in our first three examples they are nowhere, perhaps in the world, more strictly enforced—but it is an *additional precaution* of great value that the special exigencies of the case demand, and much responsibility is incurred by those who decline to accede

§ Spread of cholera by water, S. M. J. 12th October 1894.

to the dictates of our past experience. In India, and the East particularly, we are bound to take these precautions, for it would be absurd to rely solely on sanitary and hygienic improvements, for we live in a country where they do not exist, and among a people ignorant of the simplest principles of cleanliness. Were we then to wait, with folded arms, until our towns and cities are cleansed and sanitated, and until over population learns to distinguish between idle ceremonial and effectual personal purification, we should have to evacuate the country as an uninhabitable land. And as a matter of fact, there is no nation on the globe that does not uphold some system, however modified, of the principle of quarantine. The following propositions therefore may be enunciated. I propose those, with all due diffidence, as they have been modified from those laid down by the Australasian Sanitary Conference of Sydney, N. S. W. in 1884:—

(1). *The degree of protection which quarantine can afford is inversely as the ease of communication and amount of traffic between the infected country and the country to be defended.*

(2). *Quarantine can best yield a protection commensurate with its cost, only to countries whose internal sanitation is good, and in proportion to the perfection of the same.*

(3). *Countries suffering under defective sanitation may also frequently be more or less completely protected by efficient measure of Quarantine.*

(4). *The function of Quarantine, if it cannot exclude infection, is to lessen the entering number of foci of infection and to take instant measures to isolate, and arrest their diffusion, when entered.*

(5). *Countries where international organisation is not perfect cannot afford to refer the observation of suspects to the Country at large.*

Surgeon-General CUNNINGHAM has said "No case can be adduced in which the exemption of any country can be proved to have been due to quarantine or, admitting that in a case of this kind absolute proof is difficult and perhaps impossible, no instance can be adduced in which there are good grounds for believing that such exemption has been due to Quarantine." With all humility before so eminent an authority, I believe I can adduce at least one instance.

In 1892, after the Hardwar *Mela*, cholera spread throughout India and extending into Afghanistan and Persia, assumed pandemic proportions as it progressed throughout Europe. I was medical officer of the Muskhaf Bolan Railway, in course of construction, and some 6 to 7,000 coolies were collected for work along 18 or 20 miles in the Upper Bolan Valley. The Bolan Pass is about 60 miles long. Even before the Hardwar fair cholera was prevailing in Persia and in Kandahar. On the 25th April 1892, cholera broke out among a camp of, I think 400 or 500, railway coolies at Mudgorge, in the Pishin Valley, and some deaths occurred. Special precautions were taken, and coolies from the affected locality were prevented access to Quetta, and it did not spread there—cholera began also to prevail in the villages beyond the eastern entrance into the Bolan Pass in the first and second weeks of April (as I

discovered), and afterwards spread among the Nomad Brui encampments thereabouts, causing many deaths. On the 21st April, cholera was imported into the Bolan by a Brui *raia*, who however made his exitant of the Pass towards Khorasan by the Gesthari route at the mouth of the Upper pass. I heard this villager had placed his camp in quarantine and he had had several deaths. There were no coolie encampments within 14 miles, so they were not affected. But on or about 26th April, harvesting Brui had infected a couple of large villages (kirta) in the lower Bolan, where up to 15th June, about 55 cases with 42 or (76 per cent.) deaths occurred. At the mouth of the upper Bolan 5 cases and 5 deaths occurred. In the lower Bolan generally altogether (from Pirchowki to Bibinani), including those within the mouth of the upper Bolan, some 92 cases were recorded with 63 or 68·4 per cent. deaths, and these in rather a scanty population. On the 26th May, a case, in a hospital subordinate, who had been ordered on the duty, was imported into Hirok, in the centre of the upper pass, from kirta, and another on the 17th June, by train from Sibi. As I was on the spot both were promptly isolated and every precaution taken and the disease did not spread: they recovered. By special Police arrangements I ascertained, as far as the limited organisation could in non-British territory, that, in 32 villages or stations, from the 25th April, the total number of cholera cases on the Sibi-Hirok Railway line, and villages, immediately around the eastern end of the Bolan, amounted to 453 with 320, or 70·6 per cent deaths. The epidemic extended up to 2nd July, 3 months. On the 28th April the pass was blocked; all travellers coming up the Bolan were reported to have been stopped and directed to go by some other route; but Bruihs from the infected villages, including kirta, were not all removed from the Bolan until the 6th of May, several of them in caravans being turned back even from the upper Bolan, on my representations to that effect. That it was true cholera, with numerous seizures, I satisfied myself by personal visits to numbers of the cases throughout the Bolan. This rigid exclusion from the Pass, especially the upper Pass, where the coolie camps existed, proved entirely and completely successful. Not only did no case (other than the 2 importations) occur in the Bolan here, but none was imported into Quetta, a considerable town and the second largest military cantonment in India, nor into the Quetta District. And this, too, considering the circumstances, was very remarkable, for this year was a notably pandemic year, from what I could ascertain cholera was more extensively and virulently prevalent among the Bruihs and villages than in the year before; there was a far greater assemblage of Afghan, Panjabi and other coolies in the Pass (by no means clean people) than in previous years; and the year before, a probably less inviting and certainly less generally epidemic year, not only had cholera penetrated into Quetta but caused heavy mortality even among the European troops, so much so that Sir ROBERT SANDEMAN has recorded his belief that the mortality that year had been the highest on record in Beluchistan (British and agency), and there were reasonable apprehensions of a return in the following year 1892, when, with the opening of the Bolan works of

course, more favorable circumstances were to prevail. Of course in the Pass sanitary precautions as far as possible were in force, and the water-supply, although from numerous open-springs, was in great part in the higher Pass, also protected by conveyance in pipes. But these do not detract from the prominent facts already stated. Indeed, the water-supply of Quetta is also very good, though the cantonment suffered so heavily the year before.

Thus I claim that through quarantine measures under peculiarly inviting conditions, with preparatory epidemic the year previous and in a pandemic year of great virulence, an important part of British and agency Baluchistan was effectually protected from cholera. And not only this that in contradiction to reports to the contrary, the Bolan Pass and probably Khojak, which it feeds, must be held on this pandemic occasion, innocent of the advancement of cholera towards Kandahar and Afghanistan and thence through Persia to Europe.

II. I may I think, also instance the entire protection of the Samana garrison (of 3500 troops and 3000 followers on the Miranzai hills, after the expedition of that name, in the Summer of 1891 although some half dozen cases did occur in the Valley Camps, on which they solely depended for communication and supplies, I was medical officer in charge of the latter and modified quarantine measures were adopted on convoys from cholera stricken Kohat, and effectual steps taken to prevent importation of the disease hill-wards.

III. A more recent instance is the Midnapore Central Jail, population 900, of which I am medical officer since end of 1893. This year (1894) various important sanitary and other improvements have been effected, and I have besides instituted, as far as practicable, special quarantine-like isolation measures on new prisoners, besides careful supervision of town supplies, to minimize the possibility of importation of infectious disease. The results are given below compared with the adjoining town of 32,000 inhabitants.

| Years. | Cholera Cases. | | Cholera Mortality. | | Total Mortality. | |
|--------|-------------------------------|-------|--------------------|-------|------------------|-------|
| | Town. | Jail. | Town. | Jail. | Town. | Jail. |
| 1890. | Unknown. | 2 | 63 | nil. | 805 | 38 |
| 1891. | prob a bly 70 per cent of the | 1 | 125 | nil. | 1248 | 23 |
| 1892. | number of | 15 | 454 | 8 | 1878 | 52* |
| 1893. | the cases. | 6 | 88 | 2 | 981 | 56† |
| 1894. | 217 | nil. | 182 | nil. | 966† | 41§ |

* Prisoners moved into cholera camp.

† There were besides numerous choleraic diarrhoea cases (non-fatal).

A very few white diarrhoea cases (non-fatal).

‡ Up to October.

§ Up to 15th December 1891.

The last two instances are however founded on reasonable presumption.

The case of Beluchistan is, I think, established.

The promotion of administrative officers to the rank of Surgeon Major-General will henceforth be carried out under the auspices of a specially constituted Promotion Board, of which a general officer commanding a district will be president and two Surgeon Major-Generals members. We understand that the Board will sit at a very early date.

TYPHOID FEVER AMONGST NATIVES IN INDIA.*

By RAM KISHEN, L.M.S.

Medical Practitioner, Amritsar.

It has been repeatedly said by some of the most eminent members of the medical profession in this country that typhoid fever is very rare amongst Indians, and that the indolence is due to their not eating meat or eating it in very small quantity.

During the nineteen years of my professional life, I have worked in Sonapat, Delhi, Lahore and Amritsar, and have seen many cases of typhoid fever amongst natives. I find that many of the people suffer from it in a mild or severe form, at some or other period of their life, and it is not consistent with the result of my observations that we are really proof to its attacks, or if Europeans in India were to become vegetarians they would escape it.

I am sorry to say that I am not in a position to prove my assertion with a list of *post-mortem* examinations, which would certainly be conclusive, but every one of us know how difficult it is to make the people agree to such an examination.

No argument is required to prove that the pathogenic causes for the creation of this fever are amply present in India, where house sanitation is in the most primitive state, latrines not being kept as clean as they ought to be, thus exposing human excretion to the effects of the heat of a tropical sun, where drainage is mostly imperfect, thus making the liquid portion stagnate and putrefy, where heaps of filth are allowed to remain in streets, in the neighbourhood of human dwellings for hours, and in many places for days and months, where the majority of the population are not enlightened enough to look to the purity of their milk and water supply, and where the atmospheric conditions are very favorable for the active multiplication of bacteria, it would be really not only wonderful but miraculous to escape pythogenic fever. There are many who entertain not the least doubt about its existence and free prevalence in India, and a little more careful observation on the part of those who do not as yet believe in it will convince them of its existence in this country, especially in the large cities in an endemic state, the number of cases increasing and decreasing with the change of seasons.

The period of its greatest acting is that of the dry, hot summer months, when filth scattered in fields, collected in heaps near and in villages and towns and lanes saturated with liquid animal excreta, are freely exposed to the hot rays of the sun, and the atmosphere is thus adulterated with gases resulting from the decomposition, with no natural cleaning process except the occasional dust-storms to purify it; next to it the dry part of winter, when the excreta are similarly exposed, but putrefaction does not take place so actively on account of the lowness of temperature; then the rainy season, when a great deal of filth is washed away or soaked into the ground, where it is largely disinfected by the natural disinfectant, the earth, when malaria takes its place or complicates it, but typical cases are sometimes seen at this time of the year also; and last of all the spring, when, in addition to the lowness of temperature retarding decomposition, the gases arising from the surface of the land are absorbed by the free growth of vegetation in every variety and form.

* Read at the Indian Medical Congress, and sent to the Record for publication.

and corresponds in some measure with that of Davos Platz. Phthisis is unknown in Ladak.

The people are very dirty in their persons, and the men wear the Chinese pig-tail, composed of natural hair *plus* additions of string, rags, &c., until of the "regulation" length. This tail dangles on the back and leaves a dirty black, greasy streak on the garment underneath. Beneath this again the Ladaki wears his clean or "best" suit. The women are all polyandrist—this fact, together with the *bona fide* celibacy of the Lama priests, maintains an even balance between over-population and the production of the province.

As we have seen, the climate of Leh is bracing and healthy. Hence the epidemic of small-pox which broke out in the autumn of 1892, during my tenure of office in Leh as medical missionary, came upon the inhabitants with appalling astonishment. An epidemic of short duration *had* been known to have occurred *once*, in the history of Leh, 15 years previously, but small-pox was thought to have been stamped out. The exciting cause of the present outbreak was, no doubt, in some measure due to the influx of Kashmiris, just getting over the disease, having either caught it *en route* to Leh, or started from Kashmir with the disease on them, and spreading it by means of loose scales from the scabs. Every third man one meets in Kashmir is small-pox pitted, as during an epidemic they take no precautions to segregate, simply leaving the disease to run its own course, meanwhile the wretched patient stoically resigns himself to all consequences, once he finds the disease is on him, taking not the *slightest* care to use general remedies, or to ameliorate and render more comfortable the sick bed. "Die or live, let nature take its course" is his motto.

This influx into Leh is usually during the months of July, August and September (when the passes are open and admit of travelling) when it becomes, for the time being, quite a busy, noisy little town, and the rendezvous of natives from all parts of Ladak, Lhasa, other parts of Tibet, China, Kashgar, Yarkand, Kashmir and India, for the sale and purchase of their respective wares, such as rich silk, tea, precious stones, skins, dried apricot, "charras" (a kind of intoxicant) &c.

The Lamas are the spiritual, medical, and temporal advisers of the lay people, who vest in them the charge of their souls and bodies, expecting the priests to do all that is necessary for them, in order to enter *Nirvana* hereafter, e.g., write out prayers for their prayer-wheels, waft prayers to heaven on their behalf, &c.

The onus lies on them to feed and maintain the Lama priests, some of whom are thus exceedingly well off.

The method of vaccination used by the Lamas should more accurately be termed—*inoculation*.

Their method of procedure, based on the erroneous supposition that one attack of small-pox immunises a patient against a second and subsequent attacks, is as follows:—A quantity of virus is procured from a number of ripe small-pox pustules (about 8 days' old) which is all collected and diluted with water in a small earthenware vessel. This is now ready for use. The instrument used is one made of four long needles tied firmly together with their pointed ends on a level. This is dipped into the virus, and then rapidly and deeply *prodded* into the skin and muscle between

the thumb and forefinger on the dorsum of one hand only—usually the left. As there are generally some thousands to be inoculated, the operation, in many instances, is done very imperfectly, and owing to the rapidity with which it is performed, a very small quantity of virus enters a very superficially made wound, and the poor unfortunate either escapes the *inoculation* "outbreak" altogether or has a very slight one, only to be carried off with a most virulent attack during an epidemic, his fond hopes of immunity all crushed, shattered and scattered to the winds. This inoculation brings out an attack of variola, which is very mild (owing to the extreme dilution of the virus, *purposely* done in order to bring out only a mild eruption) and runs a very irregular course. The patient is well in a few days and imagines that he is now "proof" against any further attacks. An epidemic soon tests this fragile protective fabrication in a most thorough, searching and penetrating manner, and finding in it no barrier, no protection against itself, with a ready entrance, soon lays its subject low with the ground.

During the outbreak of 1892, I was waited upon by a deputation of Lama priests to give them permission to hold a public "vaccination" (after *their* method) in my hospital compound, whilst I, the doctor, was to stand aside and behold the quackish farce, seeing all my teachings in the art of vaccination set aside and contemptuously ignored. I, of course, resolutely refused their request, and in addition had my Lama friends prohibited by law, (through the kind help of the British Joint-Commissioner, Ladak and the Dewan of Lep) from carrying on their nefarious practice in public. At the same time I announced it publicly that I would perform a *different* kind of vaccination upon such as cared to undergo the operation.

On application to the Residency Surgeon, Kashmir, I received 19 tubes of lymph, which were all forthwith used up in vaccinating cases. The results were watched with very great scepticism, suspicion, and curiosity on all sides. We were all doomed to disappointment, and I, in particular, to ridicule by the Lama priests, for *not a single* vesicle rose, the lymph sent was inert *in toto*, and the whole thing seemed like "playing at vaccination." When the Lamas compared their *tangible* results with my *negative* results, they wisely shook their heads and condemned the new vaccination summarily. This was, of course, only what could be expected under the circumstances. I felt defeated for once, for failure just at the threshold of the introduction of a new method and system of vaccination in a strange country, where superstitious notions prevail concerning it, was of all things, most undesirable.

I, however, communicated these facts to the Residency Surgeon, and wrote for a supply of fresh lymph. This time I received 32 tubes, and was ready again for vaccination. *But*—would any one venture after such a miserable exhibition of failure? Would any have faith in me and my vaccination to trust themselves to a second experiment? &c., were questions that vexed me the whole of the first night after reception of my second supply of lymph. The next morning my hospital assistant, the caretaker of the hospital, and many of the Christian community came forward to be vaccinated, as also some out-patients at the dispensary. The operation was a grand success *this* time, and was praised by all, especially in that no general eruption broke out over the body and face, as is the case after a Lama "vaccination."

After all the lymph from the tubes was utilised, we carried on vaccination from arm to arm. Thus the fame of the "new vaccination" took deep root in Leh itself, and rapidly spread among the outlying villages. Delegates were sent to us daily, praying us to visit their respective villages and perform the "new vaccination." These solicitations we acceded to as far as we could, and as soon as we had leisure at head-quarters, we set out itinerating first among the neighbouring villages, and afterwards among further outlying ones, until in all upwards of 2,000 cases of *successful* vaccination were recorded.

During the epidemic, I had a house placed at my disposal for a hospital, but many patients preferred living in tents put up in rude Ladaki fashion. With every precaution used, it was very difficult to segregate the patients. It was painful to see case after case come in, previously "vaccinated" by a Lama, the present attack not in the least modified by the "vaccination." Some came in with the disease on them for the second and third time. On the other hand, there were two or three cases that had been *genuinely* vaccinated in the arm by some surgeon, years previously; in these it was most interesting to notice the very *modified* nature of the variola. Only about a dozen vesicles, about the face and body, which lasted but a few days, the patient convalesced rapidly, and was well in a very short time. Comparing these cases with those "vaccinated" by the Lama method, a lamentable mortality attended the latter, while in *every instance* the former escaped with but a very modified attack.

Such were the nature and general features of the epidemic of 1892, which began in August and lingered on till very near November, solely because it was impossible to segregate the cases, especially those occurring among the "purdah" women and their families. The mortality was very high, being fully 50 per cent.

THE NECESSITY FOR AN ACT RESTRICTING THE FREE SALE OF POISONS IN BENGAL *

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and

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(Continued from page 134, Vol. VIII.)

B. NATURE OF THE CASES OF POISONING.

It will be observed as the description of the nature of these cases proceeds, that the users of poisons are very conservative in their application. Each poison has, as it were, its own rôle or specific use, and is comparatively but seldom employed for other purposes. Thus arsenic is the poison usually selected for murder and cattle destruction, opium is the poison with which to effect suicide, *datura* the drug with which to produce stupefaction and thus facilitate theft, and so on.

The poison selected is generally that which by long established precedent has become the recognised means for effecting the desired purpose.

The import or production of some of these poisons is already under the control of the authorities; in the case of

some of the others, however, which grow wild or nearly so, any effectual control will be difficult.

From what has already been said, an account of the nature of poisoning cases resolves itself into a description of the classes of poisoning which occur, with the poisons which are generally used in each class.

The cases can conveniently be arranged into the following seven classes:—

I. Murder by poison.

H. Administration of stupefying drugs in order to facilitate theft.

III. Administration of poison to effect destruction of the intellect.

IV. Administration of poison to effect abortion.

V. Cattle poisoning.

VI. Suicide by poison.

VII. Accidental poisoning.

Each class will be dealt with in turn, with special reference to the poison most frequently used in each class. A few fairly illustrative cases will also be cited by way of demonstrating the methods of administration.

I. MURDER BY POISON.

Crime of this kind is rare in England; and the facilities for detection and difficulties of concealment are such that the statistics may be regarded as highly reliable. It is hardly possible to assume the same confidence with regard to the available returns in Bengal, for not only are the facilities for detection less but the possibilities of concealment much greater. In India the symptoms of natural disease and the effects produced by poison simulate each other to an extent quite unknown in England, occasionally baffling even experienced medical men. The fact that notwithstanding difficulties of detection *murder by poison* is three times more prevalent in Bengal than in England sufficiently indicates an unsatisfactory state of affairs. The circumstances attending specific instances of poisoning illustrate this more fully.

In England it is almost impossible for an individual during a sudden fit of passion to be able to obtain and administer poison to those with whose conduct he or she is incensed. For unless the circumstances were special, such an individual could only procure sufficient poison for his or her purpose after the lapse of a period of time sufficient probably for reason to have regained control of anger.

Such cases however do occur in India. We can adduce instances, the occurrence of which can only be attributed to the ease and rapidity with which the poison was procured.

Thus in 1893 the youngest brother in a high caste Brahmin family, residing in the vicinity of Calcutta, having had some misunderstanding with two of his elder brothers quietly entered the kitchen and mixed powdered white arsenic with some common salt lying there for immediate use. A curry was prepared with the poisoned salt and eaten by several members of the family, all of whom developed symptoms of irritant poisoning. Fortunately the quantity of salt used was small and but little of the curry was partaken at the particular meal. The victims all recovered. The common salt, the curry, and the vomit of some of the affected persons were sent for examination. Arsenic was detected in all of them. The culprit is still at large.

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

Such cases can be multiplied, but the example given is a typical one of its kind. Typical too in many ways, in the absence of premeditation, the method of administration and the selection of the poison. The two poisons most readily attainable are probably opium and arsenic. The former is not suited to the murderer's purpose, for its appearance and taste might lead to its early discovery. White arsenic, on the other hand, is tasteless and powdered and mixed with common salt would readily escape detection.

Motives for murder.—Classified according to the motive, cases of murder by poison in India can easily be arranged into types equally familiar in all countries. Thus in India as in other countries revenge, jealousy, lust, greed and avarice may any one of them instigate the act. The motives are the same everywhere. Have they borne more fruit in India, and if so, why?

The poisoner's art is probably older in India than among the modern nations of Europe; and it may be argued that use has begotten use till familiarity with the nature and effects of poisonous drugs has become very general. It is much to be doubted whether at any time in England uneducated people possessed the acquaintance with poisons which belongs to certain classes among the poor and uneducated masses in India to-day. Such poisons as they knew, and knew well, were fortunately less potent.

We do not mean to suggest that the criminal class is proportionately larger in India than in England; for we believe that it is not; but it would appear that a sense of the value of human life has taken a stronger hold of the masses in England than in India. The smaller appreciation of the value of human life in India may possibly have originated to a certain extent in her religious teaching, which tends to exalt the value of a future existence at the expense of the estimation in which, present, temporal and material possessions and even life itself, should be held. Then her teeming population and the struggle for existence with the thin margin which separates many millions from difficulty or want may serve to have accentuated a tendency which, while harmless on the part of non-criminal minds, becomes dangerous among the criminal classes.

The feeling regarding human life which exists in England to-day did not always exist. It has taken many years to develop. Time and the spread of education will, it may be hoped, engender a similar sense among the masses in India.

We have referred to those acts of poison administration which resemble acts of homicidal violence during the heat of passion, and which probably are often followed by as speedy a repentance.

But besides cases of this kind, a very large number occur annually where the poison has been administered after long premeditation and with deliberate intent. Our paper is intended to demonstrate the need for legislative interference with the free sale of poisons in India and for the enactment of laws regarding the possession of poisons by individuals in this country similar to those in England.

If such measures are to be successfully introduced, cognizance must be taken of all the circumstances special to India. It would naturally be supposed that cases of deliberate poisoning premeditated during a considerable period

of time, are those which can be dealt with least effectively and with the greatest difficulty. The poisoner has time, and may be opportunity, to select a poison, the detection of which is difficult. Does he do so?

Selection of poison.—Experience shows that he seldom attempts anything of the kind, but utilizes the one well-known poison, viz., arsenic. Scientific poisoning is practically unknown in India. As a rule, large quantities of poison are administered, and whether the act be sudden or long premeditated, the one poison commonly chosen to effect murder is the easily detected poison, *arsenic*.

We will cite a case of long premeditated and determined murder by poison which occurred in 1893, to illustrate the point:

A Sikh named RAJAH SINGH, the prospective heir to some property, had a long-standing dispute with some of his co-religionists regarding the estate. Taken one day by one of these men, JOWHAR SINGH, to the Sikh temple in Burrabazar, he was given "*Karaprasad*" a sweet-meat sacred among the Sikhs to eat. While eating it, RAJAH SINGH objected to the taste, and protesting that it was not the real "*Karaprasad*" but ordinary sweet-meat or "*halwa*" wanted to eject it from his mouth. He was however persuaded to swallow the sweet-meat on the ground that as a true Sikh he ought not to insult the "*Karaprasad*."

Shortly after he left the temple to return to his house, but became ill on the road and vomited once. On arriving at his house, he became very ill, suffering from vomiting and purging.

Suspecting that he had been poisoned, he communicated his suspicions to his mother and other relatives. He was then taken to the Medical College Hospital, where his stomach was washed out and where he made the above statement to the medical officer on duty. Next day he died. The stomach washings and viscera were sent to the Chemical Examiner for analysis, and arsenic detected in both of them.

Here avarice was the motive. Very frequently the motive is lust. Thus during 1881, a case was referred from Cooh Behar in which a faithless wife poisoned her husband with arsenic and afterwards married her paramour.

Arsenic has occasionally been used by step-mothers to remove unsatisfactory step-sons. In May 1884, CHARCOO NASTA, a Mahomedan lad aged 19 years, died at Diuagapore with symptoms of vomiting and purging after partaking of food given him by his step-mother. Arsenic was detected in the vomited matters, and also in the viscera.

In cases of murder by poison, white arsenic is chiefly used, yellow arsenic occasionally, and red arsenic rarely. *Darmoj* and other arsenical preparations are very rarely employed.

As will be shown later on, the greater quantity of arsenic in the country has been imported by sea. The quantity naturally available in India is very small; yet to-day the drug is to be found every where. How then has its dissemination and the knowledge of its properties become so general?

The question is interesting and not entirely speculative; for it might be possible from such data to ascertain the period of its rise into favor as a poison.

We have stated that arsenic is the poison most frequently used to effect murder. A definite statement giving the

percentage of cases of murder by poison in which arsenic has been the poison selected ought to be forthcoming. Unfortunately no such statement is available.

The Chemical Examiner's reports shew in what proportion of fatal cases of poisoning of all kinds arsenic has been detected, but the cases cannot be classified with any certainty by the Chemical Examiner from the information supplied to him.

Next in frequency of use to arsenic comes *aconite*. The following is a typical case of *aconite* poisoning. On 6th May 1891, 3 coolies of the Chamar caste were found lying dead in the Dhurmutolah market; 2 others were unconscious, but subsequently recovered. The investigation shewed that all five men had been poisoned with *aconite* mixed in their food by one JETROO Chamar at the instigation of SHUNNOO Chamar. All concerned were fellow countrymen, and had been friends up to the time of the act, the cause for which apparently consisted in the fact that one of the murdered men had a quarrel with JETROO Chamar, who thereupon introduced poison into the common meal of five individuals with four of whom he was not in any way at variance.

No example could be more striking of the recklessness of the poisoner on the one hand or on the other of the small provocation required in some instances to induce the act.

Besides *arsenic* and *aconite*, preparations of *mercury*, *copper*, *antimony* and *nuxvomica* are occasionally, though rarely, used for the purpose of murder.

The small and other physical characters of opium are effectual obstacles to its frequent employment for murder. It is used however to effect infanticide, and sometimes is given in wine to drunken individuals to effect murder.

On one or two occasions of late years, the alkaloids *strychnine* and *morphine* have been employed.

The method of administration is that in use from time immemorial, *viz.*, of mixing the poison with the food. Thus yellow arsenic can be fairly well concealed in dal, curry, and white arsenic in common salt. All articles of food are utilised. If the poison be tasteless or nearly so, and well concealed in the food, the better is it taken by the victim.

II. ADMINISTERING OF STUPEFYING DRUGS TO FACILITATE THEFT.

This class of crime is but little known in Europe. In India it is very frequent. The police returns for the province of Bengal show that 23 cases of administration of stupefying drugs to cause lurt occurred in 1893.

The drug almost universally employed is *datura*, well known as the *thug* poison, since those of the *thug* gangs who were not adepts in the use of the sling, employed *datura* to drug their victims and subsequently robbed them when helpless.

The history of one instance of *datura* poisoning is practically the history of all of them. A stranger joins a party of individuals on a journey, and wins their confidence sufficiently to be allowed to cook or prepare their food into which he introduces powdered *datura* seeds. On one plea or another he excuses himself from partaking of the common meal which is eaten by the remainder of the party, who succumb to the influence of the drug and are easily robbed.

Robbery by means of *datura* is almost a profession, and many of those who practise it display considerable dexterity in the method by means of which the admixture of the poison with the food of their victims is carried out. The use of a hollow pestle filled with powdered *datura* seeds and having a small orifice at the lower end is sometimes resorted to. The pestle is employed to grind the pepper and other condiments for use in cooking the food, and the drug is thus successfully introduced therein without even exciting the suspicion of the victims.

The employment of *datura* is probably encouraged by the popular belief that it produces unconsciousness only and not a fatal result. The use is for the purpose of making robbery easy and of avoiding violence. Murder is not the object but the reverse. The administration frequently, however, results in murder, as the following record will show:—

In July of this year (1894) at Monghyr, *datura* was administered to the crew of a boat numbering 8 persons, one of whom subsequently died from the effects of the drug. The robbers got off with their booty. As the case is typical, the following account furnished by Surgeon Major D. G. CRAWFORD may prove interesting:—

"Two men took a boat at Sompur to carry them to Naraingarj. On the evening of the 22nd July the boat was tied up for the night at Gogri, opposite Monghyr. The crew consisting of seven men and a boy (son of deceased) took their food as usual about 9 or 10 p. m. They went to sleep. Next morning they were all found insensible and one died about noon. The other seven were sent to Monghyr where they arrived at about 2 p. m. to-day (24th July). I saw them at about 4 p. m. All had somewhat dilated pupils. One talked somewhat incoherently, the rest appeared to have fully recovered. All their property had disappeared: so had the two passengers who are supposed to have mixed drugs in their food for purpose of robbery. The two passengers being of a different caste did not eat with the crew."

In most cases of *datura* poisoning, the whole fruit or powdered seed is administered mixed with solid food. In such cases, fragments of the seed can frequently be detected on microscopic examination in the vomited matters, the excrement and in the food. Occasionally, though not frequently, spirituous liquors are made the vehicle for the administration of the drug. During the current year a case occurred in which *datura* was administered in this manner. A prostitute was visited by a man who, in the course of the interview, offered the woman some country liquor to drink, and in proof of its character drank some himself. After drinking the liquor the woman became unconscious and the man, with whom she had had no previous acquaintance, having stripped her of her ornaments tried to decamp. In this case *daturine* was extracted from the country liquor, from the stomach washings and from the excrement of the poisoned woman, as well as from the stomach washings of the accused.

Administration of datura to facilitate murder by violence.—As already stated, the employment of *datura* is almost invariably for the purpose of facilitating theft. One instance however occurred during the current year (1894) where it was administered to facilitate the murder by violence of a Hindu male, sixty-five years of age.

This man had two wives, of whom the younger MATANGINI, had contracted an intimacy with another man. The husband objected to his wife's misconduct, in which, however, she persisted, notwithstanding an occasional beating at the hands of her husband. On 30th May, instigated by the woman who arranged the interviews with her paramour, MATANGINI mixed a whole *datura* fruit in the curry which formed her husband's meal. When the husband had become unconscious, MATANGINI killed him with a *dao*. On the discovery of the dead body, the murderess made a full confession of her crime.

III. ADMINISTRATION OF POISON TO EFFECT DESTRUCTION OF THE INTELLECT.

Such cases of the crime as might come to the notice of the authorities would no doubt be included under the heading of the administration of stupefying drugs to cause hurt. The drug employed is almost always *datura*. But little is known regarding the crime and the production of specific instances is impossible. It is carried out secretly and very gradually, so as to simulate the natural course of mental disease and to excite the suspicion neither of the victim nor his friends. It is stated that women administer *datura* to their husbands in this manner, in order to obtain opportunity for the successful prosecution of love intrigues; and that prospective heirs to large properties are thus deprived of reason by individuals interested in the succession, as under Hindu law insanity is a bar to inheritance.

IV. ADMINISTRATION OF POISON TO PROCURE ABORTION.

Unsatisfactory statistics of abortion cases.—The average annual number of cases of abortion reported in the Bengal Police Administration Return for the years 1888 to 1892 was 24. It is not stated whether these are cases of simple abortion or death, the result of the attempt. In none of these years either was any case reported as having occurred in the town of Calcutta.

The small number of the cases reported for the whole of the province, and the fact that none are reported from the town of Calcutta, may be taken as almost sufficient evidence that a small number only of the cases that actually occur ever come to light.

A practice in procuring abortion is carried on by certain women of low caste, who occasionally administer sufficient poison to their clients to effect a double murder. These women frequently pass themselves off as midwives.

Methods employed to effect criminal abortion.—The method generally employed is the introduction into the cervix uteri of the stems or roots of plants which possess irritant active principles. Thus *Plumbago Rosea* (*Lalchitra*), *Nerium Odorum* (*Karabi*), *Calotropis Gigantea* (*aband*), *Euphorbia Tirucalli* (*Lankasij*) and others are utilised. Sometimes bamboo sticks coated with assafoetida are introduced to effect the purpose.

The violence used together with the local action of the drug occasionally sets up hæmorrhage or septicæmia, ending in a fatal issue and the discovery of the crime.

Now and then drugs are internally administered in the attempt to procure abortion, and have been found after death in the viscera of women who have died as the result of the attempt. Arsenic, yellow oleander, *Colocynthis*, *plumbagin* (the active principle of *lalchitra*) and other poisons have been detected in the viscera in such cases.

V. SUICIDAL POISONING.

Serious increase of suicide by poison.—The degree to which suicide prevails throughout the province of Bengal has already been dealt with. It has been pointed out that there is every reason to believe that suicide is on the increase, at any rate in Calcutta and other large towns. Part of this apparent increase may be due to the better system of records now in vogue in Calcutta; but it can hardly account for the total increase which the figures indicate. Thus the total suicides from all causes in Calcutta town and suburbs, which were 84.94 per million per annum for the five years 1876 to 1880 had swollen to 123.52 per million per annum during the five years 1889 to 1893, shewing an increase of 38.58 per million. This fact is serious, and becomes more so, when it is understood that of the total increase of 38.58 per million, suicide by poison accounted for 32.42 per million.

Selection of poison.—Of the total suicides occurring annually in the town and suburbs of Calcutta, 40 per cent. are accomplished by taking opium, arsenic is selected in 5 per cent. of the cases, and other poisons not indicated in 11 per cent.

Among the population dwelling in the municipal area of Calcutta during the year 1st June 1893 to 1st June 1894, 52 deaths by poison occurred; of these 44 (all suicidal) were due to opium or 84.6 per cent.*

The facts then that claim attention are the following, viz.—

(a). That the crime of self-destruction has enormously increased during the last ten years, and that the cases which have produced the increase are almost entirely those of suicide by poison: for while during the five years 1876 to 1880 the average of suicide by poison to the population was 36.42 per million, in the period 1889 to 1893 it had risen to 68.84 per million or nearly double.†

(b). Of 100 cases of suicide occurring in the town and suburbs of Calcutta, 56 are due to poison; and of the 56, in 40 opium has been the poison taken, in 5 arsenic, and in 11 other poisons.

It is well recognised by the writers of this paper that the conditions of life existing in the town of Calcutta find no counterpart in the rural districts of the province, and only to a limited extent in the large towns at the present time. Still as increase in the crime may be regarded as the outcome of unhealthy social conditions, and as the social conditions existing in Calcutta must sooner or later prevail in all the towns of the province, and at some remote period in the rural districts also, it would be interesting to enquire what those social conditions are, in which an explanation of the increase in the crime of suicide must be sought.

* Dr. J. B. Gibbons informs us that of the 52 cases of poisoning in which he made a post-mortem examination 44 were due to opium, 1 to sulphuric acid, 5 to arsenic and 2 to hydrocyanic acid.

† Suicides from all causes in the town and suburbs of Calcutta:—

| | | per million |
|-------------------------------------------------------|----------|-------------|
| During the period 1876-1880 | | 84.94 |
| Ditto 1889-1893 | | 123.52 |
| | increase | 38.58 |
| Suicide by means of poison throughout the same area:— | | |
| During the period 1876-1880 | | 36.42 |
| Ditto 1889-1893 | | 68.84 |
| | increase | 32.42 |

Social conditions contributing to the increase in the occurrence of suicide.—Except in a certain proportion of those cases where suicide is resorted to in order to escape the extreme penalty of the law, it is justifiable to regard all cases of self-destruction as the result of a temporarily or permanently unsound mental state. A healthy mind in a healthy body is probably the greatest of earthly blessings. Their varying conditions mutually interact however to the impairment or otherwise of their individual functions. Thus the physical conditions of the dwellers in large towns are often such as to interfere with healthy mental action and development.

A disease or unsound state of mind may be permanent or temporary, may arise from the exaggerated development of certain mental attributes or from a deficiency in the development of others. It may be organic lesion or functional derangement only, and may proceed from over-strain, from vicious habits of life, or from over-indulgence as the addiction to the excessive use of alcohol or Indian hemp and other drugs.

In a large population there is always a certain proportion of mentally weak individuals in whom the condition either exists as a congenital defect, or has become developed as the temporary or permanent result of circumstances. In the case of such individuals, self-control is weak or deficient, and imagination not habitually kept in check by the higher mental faculties.

When a community is affected by any social wave or change, these are the members of the community who, as a rule, display the most evident symptoms of the movement, acting as it were the part of social weather-cocks. They are the most ready to adopt new phases of thought and to sever themselves from their ancient religion and traditions. The religious system of a country is for the most part calculated to support its social fabric, to assist the individual in maintaining moral and mental self-control not only in times of prosperity, but also in times of adversity.

It may be noted in the histories of nations, that when the influence of the national religion is weakened from any cause, a measure of social convulsion often ensues. The extent and nature of the social movement must depend upon the natural mental calibre of the country, if outside influence be excluded. At the present time in Calcutta and other large towns of India, a social movement of the kind referred to is taking place chiefly among the younger members of the community, who seem to be emancipating themselves from the tradition and influence of their ancient religion. Those among them less mentally robust than the majority are thus deprived not only of that support which religious belief affords to weak wills, but also of the influence which the doctrines of their religion exert. Thus as regards suicide, the *shastras* inculcate that there is no salvation for the individual who has destroyed his own life. In former times, the Hindu placed implicit faith in the *shastras*, but his descendants are in many instances falling away from the belief.

The modern Hindu is more an artificial than a natural product. Furnished even in his own country with a foreign education and living within touch of a foreign system of civilisation, he has in many cases lost the patience

and resignation engendered by his ancient creed to gain instead imaginary wants and wild aspirations improbable of realisation. Such influences acting upon any mind not absolutely sound are prone to produce outbursts of one kind or another on small provocation. A hypersensitive condition is induced and events quite insufficient by themselves upset a feeble mental balance and give rise to such an exaggerated estimate of even trifling troubles that self destruction is resorted to.

Exciting causes inducing suicide.—The exciting causes which acting on an unhealthy mind induce suicide are the same in every country.

Ill-treatment, quarrels, jealousy, despair, destitution and physical suffering, all can claim their victims, and among both sexes. But in Bengal, as in England, the incidence of suicide is unequal in the two sexes. In England the male sex furnishes the larger number of cases, in Bengal the female, according to the Sanitary Commissioner's Reports.

It has been shewn that suicide has increased of late to a painful extent among the Hindu population of Calcutta. The cases that occur are of all kinds. Thus merchants on pecuniary reverse, students failing to pass their examinations, disappointed suitors, wayward sons checked by their parents and unhappy girl-wives, all attempt to find in suicide an escape from their real or supposed misfortunes.

The minds of the young, possibly the women chiefly, do not acquire a healthy tone from the perusal of the sensational worthless novels now being published in large numbers by the vernacular press of Bengal.

We presume that every one now-a-days admits that persons who attempt or commit suicide should in most instances be regarded as either permanently or temporarily irresponsible for their actions. They are therefore legitimate objects of care to the legislator according to the modern conception of civilisation; and since the easy accessibility of poison is responsible for a large number of suicides, it is this very easy accessibility of poison which should first be dealt with by legislative interference.

Opium has been shewn to be responsible for the majority of cases of suicide in the municipal area of Calcutta whether by violence or otherwise; and opium is to be found in any quantity everywhere throughout the country. Other poisons are also used, and among them some the introduction of which into the country is only of recent date, and due to the development of certain trades such as photography and electro-gilding. By this means *cyanide of potassium* has become known and has been employed in one or two cases. The extensive development in the trade of European drugs has familiarised many among the educated classes with their qualities and led to their employment also to effect suicide.

No definite statistics as to frequency of use of the different poisons for suicide throughout the province.—As already stated, no figures are available to shew what proportion of the suicides reported in the Sanitary Commissioner's Return is due to poisoning, or what was the nature of the poisons chiefly selected. It is accordingly very difficult to obtain any idea not only as to the number, but also as to the nature of cases of suicide by poison occurring in the province outside Calcutta.

of a large number of cysts and daughter-cysts measuring 40 fluid ounces, thus making a total of 203 fluid ounces. The cavity was thoroughly irrigated with a solution of the bichloride of mercury 1—2000, dried as well as possible and dusted internally with iodoform. The sac wall was now sutured to the external wound by means of silk worm gut. A large sized drainage tube inserted into the cavity (13 inches in length and 1 inch in diameter), the whole being covered over with absorbent salicylic wool and bandaged.

Symptoms, 16th April.—Patient restless and faint; temperature 7 a.m. 100.2° F., 7 a.m. normal; wound irrigated and dressed antiseptically; percussion gives a resonant note all over right side of chest; no breath sounds are audible on auscultation.

19th April.—Patient continues very restless. Evening temperature ranges from 100.4° to 102° F. Morning temperature ranges from 98° to 99.6° F. Breathing short and hurried; no pain; wound healthily looking; discharge scanty but sweet; cavity irrigated and dressed twice a day; micturates frequently; bowels constipated.

21st April.—Had a fair night's rest; breathing still hurried and somewhat difficult; no pain; the discharge is now slightly more profuse; a few sloughs (hydatid membrane) and daughter cysts escaping during irrigation; matters removed; wound healthy; takes nourishment well; complains of great thirst; bowels moved after a laxative.

23rd April.—Has been very restless; extremities cold and clammy; is losing flesh rapidly; temperature ranges between 101° and 102.8° F.; respiration hurried; pulse very weak and rapid; discharge now very profuse and offensive; the whole cavity suppurating freely; cavity irrigated twice daily and dressed; diarrhoea has unfortunately set in, he having had 9 stools in 11 hours of a yellowish, loose and highly offensive character.

26th April.—Nights have been very restless; sleeping only in snatches; is bathed in perspiration; extremities clammy; temperature ranges between 100° and 103° F.; discharge very profuse and offensive; diarrhoea continues to exhaust him.

30th April.—Patient very restless but perfectly conscious; extremities are cold and clammy; temperature ranges between 102° or 103.8° F.; pulse weak, 146 per minute; respiration hurried; breathing stertorous; discharge extremely profuse and offensive; diarrhoea severe, 12 to 14 stools in 24 hours. He continues to take his nourishments extremely well.

1st May.—Died at 11 a.m.

Treatment.—Cavity irrigated with the following solutions according as the circumstances arose:—Permanganate of potash gr. $\frac{1}{4}$ to $\frac{3}{4}$; bichloride of mercury 1—2000; tincture of iodine $\text{m} \times \frac{1}{10}$ to $\frac{3}{4}$; zinc sulph. grs. ii to $\frac{3}{4}$; and zinc sulpho carbolat grs. iv to $\frac{3}{4}$.

Internally.—A mixture of quinine sulph., ammon. carb. and decoction of cinchona, Calcis Sulph. gr. i in pill three times a day. Calcis phosphor gr. i in each feed; morphia, bromidia, sulphonal, tincture chloroformæ et morphinæ co; pil plumbi c. opii, vin ipecac, enemata of starch et opii, bismuth et opii, etc.—

Diet.—Beef tea, chicken broth, raw beef juice; calves feet jelly; Mellin's food.

Stimulant.—Brandy and stout.

A post-mortem examination was made, and the whole of the right thoracic cavity was found empty; the pus-discharging surface being very large. The right lung was found collapsed, about the size of a man's fist, but intact showing no communication with the cyst in the right pleural cavity, and lying adherent and adjacent to the left lung on the left of the spinal column on the upper and convex surface of the liver; there was situated a single small hydatid cyst, about the size of a hen's egg, the sac-wall of which was of a yellowish brown color, this apparently had no connection whatsoever with the one arising from the pleura; no perforation of the diaphragm was noticed.

Remarks.—(1) Previously diagnosed as bronchitis; (2) the short duration of symptoms; (3) hydatids of pleura rare; (4) enormous size of cyst; (5) no expansion of lung after operation and no falling back of heart into its proper position. Liver still remained pushed down in the abdominal cavity; (6) adhesions preventing collapse of the walls of the cavity and thereby tending to profuse suppuration, exhaustion and death.

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A CASE OF STRICTURE OF URETHRA; COCK'S OPERATION: RECOVERY.

By F. S. GHANDHY, L.M.S.

Assistant Surgeon, Ranchorelal Dispensary, Ahmedabad.

On the 5th January 1895, at midnight, I was called to see a patient, about 50 years of age, who was suffering from retention of urine. He had suffered from gonorrhoea in his youth.

He had seen me two months before for difficulty in passing urine, when a stricture was detected and he was advised to stay in the hospital; but he would not.

During the day (5th January) he was treated by two other practitioners, who were unable to draw off the urine by a catheter.

When I saw him the bladder was distended and the patient was in great distress. Some blood was oozing out of the urethra, probably the result of previous cathetrization. I tried to pass a catheter, but failed.

I then aspirated the bladder above the pubis and drew off 15 oz. of urine which was mixed with blood. I was not able to empty the bladder, as the bloody urine choked up the trocar of the aspirator.

On the 6th January I was sent for again and found the bladder distended. Aspiration was again tried, but it failed on account of the trocar getting choked up with clots.

At 2 p.m. Cock's operation was performed under chloroform, and a large quantity of dark colored bloody urine was evacuated.

A female catheter was held *in situ* in the artificial opening, and the wound dusted with iodoform and boric acid, and dry lint dressing applied.

7th January.—Temperature 98.4°; patient feels much relieved, clear urine flows out of the catheter.

14th January.—Patient feels very inconvenient on account of the catheter in the perineal wound; catheter removed.

15th January.—Urine passes freely from the meatus urinarius. On trying to pass a catheter through the perineal opening I found it blocked up.

16th January.—Passes urine freely by the urethra. A No. 8 metallic catheter can now be easily passed.

20th January.—The perineal wound has healed up.

Remarks.—This case is remarkable in that aspiration of the bladder was found impracticable on account of the blood in the urine. At one time I thought there was a villous growth in the bladder, but after the escape of all the bloody clots the urine flowed quite clear. It seems therefore that former cathetrizations (probably forcible) had produced bleeding at the seat of stricture from which the blood must have percolated into the bladder.

In a previous case of stricture, where no catheter could be passed, and where there was retention of urine, I aspirated the bladder morning and evening for three days and at last was able to pass a catheter and draw off the urine. The rest given to the stricture relieves it, and allows of subsequent cathetrization which saves the patient from a cutting operation.

Perhaps the same treatment in this case would have been successful, but for the blood clots in the bladder.

However, the operation also gave a very satisfactory result, as the urine began to flow by the natural passage immediately after the removal of the catheter from the wound, and the wound itself healed up very rapidly.

MARCH 1, 1895.



James G. G. G.
G. G. G. G.

OUR PICTURE GALLERY.

HIS HIGHNESS SIR BHAGVAT SINHJEE,

K.C.I.E., M.B., C.M., M.R.C.P., F.B.U., LL.D., D.C.L.

THAKORE SAHEB OF GONDAL,

Vice-President, Indian Medical Association.

HIS HIGHNESS SIR BHAGVAT SINHJEE, K.C.I.E., M.B., C.M., LL.D., D.C.L., the present Ruler of Gondal—a first class Native State situated very nearly in the exact centre of the historic province of Sanraashtra in Western India—is a Jadeja Rajput by descent, and as such belongs to the lunar dynasty which traces its origin to the renowned KRISHNA. After the great destruction which is said to have befallen this race at Veraval-Patan about 5,300 years ago, the survivors established themselves in Sindh, whence they migrated into Cutch, which country they took possession of by force of arms. After some time a member of their family settled at Hallar in Kathiawar and assumed the name of Jain. The place which he fixed on as his residence is now known by the name of Jain Nagar, the city of Jain. As the members of their family increased, they separated and established independent chiefdoms, such as Gondal, Dhol, Rajkot, &c. The founder of the Gondal House was KUMBHOJI I., who inherited a moiety of his patrimonial estate from his brother SAHEBJI, Chief of Rajkot, and expanded his possessions considerably by his valour and military prowess. The present THAKORE SAHEB is the twelfth in descent from him. At the hands of KUMBHOJI I.'s warlike successors, the taluka had to undergo the process of gradual development till it achieved, as at present, the rank of one of the foremost states in Kathiawar. The resources of the State were vastly increased by several British officers, who were entrusted from time to time with its management during the minority of THAKORE SAHEB BHAGVAT SINHJEE.

The minor Chief was born on the 24th October 1865, and so he was only four years old, when his father SAGRAMJI, of pious memory, died in Bombay. In his boyhood he gave promise of a very hopeful future. Being somewhat modest and reticent in habits, he had more of the thoughtful than the playful boy in him. He was but little fond of frolic, and from the beginning evinced considerable aptitude for study. At the age of nine, the Prince entered the Rajkumar College, an institution then recently established at Rajkot for the education of the Kathiawar aristocracy. His whole college career extending over a period of nine years, was one of uniform success, characterized alike by ability, industry and good behaviour. For a considerable time he maintained the position of head of the college, and without interruption, won the annual prizes either for diligence, drawing, or proficiency in English. He had advanced so far beyond his fellow students that in the words of the principal, "he had to be put in a class by himself." He is a notable product of English education, and well worthy of such praises as were ever bestowed on a member of Indian royalty by such earnest educationalists as MR. CHESTER MACNAUGHAN, PROFESSOR F. G. SELBY and SIR WILLIAM MUIR.

In order to give a finishing touch to his education, he, with the laudable desire of seeing with his own eyes all that was worth studying in the manners and customs of the English people, ventured to undertake a tour in Europe under the guidance of Major (now Colonel) HAMCOCK. He spent nearly four months in England and Scotland, and then made a short tour on the Continent, visiting Paris, Brussels, Hamburg, Lucerne, and other places in Switzerland, Milan, Venice, Florence, Rome, Naples and Brindisi, returning to India on the 13th of November 1883. He has published the experiences and impressions of his travels in the shape of a regularly kept journal or diary, which is a delightful and interesting record of the scenes which the young Prince went through in the course of a somewhat hurried trip of six months' duration. The book is very favorably noticed by the Indian, English and Continental press as much for its style and literary merits as for the fair and independent observations of its royal author. It is a rare thing in India for a Chief to take to book-writing, and this book does no little credit to the youthful Prince.

Soon after his return from his journey, the Chief was initiated into the public business of his State by being associated in administration with Colonel NUTT. He assumed sole charge of his State on the 25th of August 1884. His installation speech is regarded by his people as a *Magna Charta*, inasmuch as it puts forth an important declaration of his future policy, and it was so very thoughtful and effective, that the Governor in Council publicly complimented him for the matter and tone of it. "Subsequent events have shown," says the *Times of India* of 31st July last, "that the high professions in the speech were real, and that the ends of government which the young Chief then defined have been kept clearly and practically in view."

In the same year he was nominated a Fellow of the Bombay University—an honor to which his literary pursuits fully entitled him. In the early part of 1886, the THAKORE SAHEB again proceeded to Scotland, with a view to reside for some time at the Edinburgh University. He stayed there over fifteen months, and so much distinguished himself as a willing and diligent student of science, that the old Scottish University thought fit to confer on him the honorary degree of LL.D.—a distinction never before bestowed on a native of the Bombay Presidency. He was present in England at the time of the grand Jubilee festivities in the capacity of a member of the deputation sent to that country by all the chiefs of Kathiawar, and was fortunate enough to receive from the hand of Her Majesty in person the insignia of Knight Commander of the most eminent order of the Indian Empire. He returned to India on the 13th of August 1887. The day was a memorable one, as the Thakore Saheb received from his subjects a grand ovation on his safe return home. Addresses of welcome and congratulations were showered on him from all sides, and young and old, rich and poor, all turned out to a man to honor and greet him. The same year the Government of Her Majesty the Queen-Empress was pleased to raise Gondal to the rank of a first class Native State "on account of

its importance and advanced administration," and to announce that in future the Rulers of Gondal would be entitled to a salute of eleven guns—thus affording no small personal satisfaction to His Highness to find his State advance, his *regime* both in rank and power, and recognised as one of the best governed states in India.

In the beginning of the year 1890, His Highness' beloved consort, RANI SHRI NANKUNDEBA of Dharampore was taken suddenly very ill, so much so that her doctors strongly advised her to go on a long sea voyage and reside for a time in England under the best medical treatment available there. Accordingly, His Highness was obliged to set sail on the 21st March, with his Rani and children, leaving his Dewan in charge of the State. This Rajput lady was the first Rani of an Indian ruling Chief who ventured to set aside her caste prejudices and to cross the ocean or the 'Kali-pani' as they call it in India. Her Highness had to be kept under medical treatment for over two years, during which time her health saw much improvement. His Highness the Thakore Sahib, who is studious by nature, could not allow this long interval to press heavily on his head. Being very fond of science, and especially of medical science, of which he is a dilettante—he again joined the Edinburgh University, and with the assiduity of a regular student, qualified himself for the high degrees of M. B. and C. M. in that faculty and earned the diploma of M. R. C. P. in the ordinary course. In June 1892, the distinguished University of Oxford, on the occasion of its commemoration day, thought fit to confer on His Highness the Honorary Degree of D. C. L. His Highness may well be proud of this rare academic distinction, which also seems to have greatly rejoiced his subjects, whose idol he is and who, in appreciation of his just and beneficent rule have, with one accord, voted him a colossal bronze statue by public subscription. This is unique in the history of the province; for one must search in vain for a parallel in which the good deeds of a living Chief are sought to be held in such honorable remembrance by his people.

It is pleasant to note that the object which had induced His Highness to take his Rani to England was accomplished beyond all expectation. Her Highness's health considerably improved under the skilful treatment of the Edinburgh doctors. This was highly gratifying to the people of Gondal, whose gratification was much enhanced when they came to learn that the membership of the Crown of India had been conferred on Her Highness by Her Majesty Queen Victoria.

After having graduated in medicine, His Highness, accompanied by his convalescent Rani, returned to India in the beginning of 1893 *via* America, Japan, China, Australia and Ceylon, thus accomplishing the daring feat of touring round the world. His Highness and his courageous spouse have earned the reputation of being one of the most travelled couples on this side of the world. The dauntless Rajput Princess is the first of her class and rank who has discarded the *purdah*, accompanied her lord to a foreign country, sharing his joys and sorrows, and proceeded in circumnavigating the earth. In response to an invitation, their Highnesses had the pleasure of paying another visit to England on the occasion of the opening ceremony of the Imperial Institute.

The time has not perhaps come of pronouncing a definite judgment upon the career of this enthusiastic young Chief, whose plans and ideas of a sound and enlightened government have not yet possibly been given full scope. Still if what he has already done for his people be taken as an earnest of what is to follow, His Highness may justly lay claim to be called a very capable and efficient administrator. He takes a keen and intelligent interest in his administration, and nothing is done without his knowledge. He regularly attends office at stated hours, and carefully looks to the wants of his subjects. He has created the office of a travelling doctor with a view to afford medical aid to villagers who are living at a distance from the principal towns, where there are dispensaries. The duty of the travelling doctor is to visit the villagers in periodical rounds and give medical assistance on the spot to the ignorant and the poor who cannot conveniently resort to hospitals. This novel experiment has answered so well that in the opinion of LORD HARRIS, His Highness' "example may be copied not only in Native States, but also in British territory." The Gondal Infirmary, known as the Bai Sahib Ba Asylum and Orphanage, is also the first and the best institution of its kind in the province. It is founded in memory of His Highness' deceased wife Bai Sahib Ba. In this Asylum the infirm and disabled, who are unable to earn their livelihood, and are otherwise uncared for and neglected, are provided with clothes, board, lodging and medical aid. Separate wards are assigned to separate castes, and thus the institution is a real blessing to many laboring under physical disabilities. "The success of this unique institution," says SIR CHARLES OLLEVENT, "bears grateful testimony to the benevolence of the founder."

The Chief has the wisdom to invest a large surplus capital in the construction of railways known as the "Blavnagar-Gondal" and the "Gondal-Parbanda" Railways. He is also a joint proprietor of the branch line known as Jetalpur-Rajkot Railway, which was formally opened for traffic by the Governor, LORD HARRIS. Jetalpur is a town belonging to Gondal. And this branch connects His Highness' capital with Rajkot, the Agency head-quarters on the one hand and with the main line on the other. It will thus be seen that the State has been very forward in promoting railways in the province.

The agricultural interests of the State have been stimulated in many ways, and every effort has been made to introduce superior wheat and new kinds of vegetables throughout the State. Irrigation by wells has been dealt with in a practical manner. New wells are being sunk every year. All this means increased revenue and prosperity, as well as safeguarding against local famine. The Gondal Horticultural Gardens are known all over Kathiawar. They are considered to be the best in the province, and are kept in excellent order. An agricultural class is also attached to them to enable agrarian youths to receive lessons, practical and theoretical, in the rural craft. Besides these, the State scholarships, schools, remissions of obnoxious taxes, grants of important concessions and privileges to his people, &c., are some of the works inaugurated by this intelligent young Chief.

He marked his appreciation of his *alma-mater*, the Rajkumar College, by giving it a handsome donation for

the purchase of books and book cases. A similar grant was given to the Bombay University for the collection of old Sanscrit manuscripts, and to the Oxford Indian Institute Building funds as well as to some other institutions of public importance.

These and other acts of the Ruler give unmistakable signs of a very bright and glorious future before him. As the vane shows the direction of the wind, as does the past decade's career of this able and worthy young Chief bear ample testimony to his capacity to rule his subjects right and well. It is no wonder that the State should advance in importance and prosperity by leaps and bounds under such a careful and well-meaning guide. It will not be amiss to note in this place that from the time of the British management to the present day the State has spent about £1,000,000 in public works, general improvements and railways. Besides the railways, it possesses 100 miles of metalled road, which is always kept in good repairs. The State owns nearly eighty schools, including Anglo-vernacular and vernacular schools, Sanscrit pathshalas, girls' schools, Urdu schools and night schools, all maintained at an annual expenditure of 30,000 rupees. His Highness has spent Rs. 2,50,000 on the education of boys and girls during the past ten years, against Rs. 1,30,000 spent during the past ten years of his minority, and the tendency is still on the increase. His Highness has, under contemplation, the establishment of a Girasia School at a cost of about a lac and a half of rupees for the benefit of the sons of petty landlords who are very backward in education. It is to be a boarding institution on the model of a public school in England.

The State supports two large hospitals and four dispensaries, including the travelling one. The medical department is under the direct supervision of His Highness, who takes considerable interest in its improvement by introducing many useful reforms and wholesome changes in the internal arrangement and general management of all the medical institutions of the State. His Highness has also recently created a new appointment of Health Officer, whose duties among other things, are to effect such measures of sanitary reforms as would tend to provide pure water, better drainage, proper conservancy and an efficient mode of disposing of filth. This is considered to be an important step in advance.

His Highness is the only State in Kathiawar which regularly publishes its annual reports. The telegraph connects his capital with the rest of the world. The State has a well-organised police, maintained at a yearly cost of Rs. 1,40,000, as also post offices, courts of justice, municipalities and various other institutions like those in the British territories.

The Gondal State is situated between latitude 21°58'N. and 21°7'S, and longitude 71°5'E, and 70°5'W. There are 174 towns and villages in the State with a population ranging from 200 to 20,000. The soil is about one-half of the taluka is black cotton soil and very good, whilst of the other half, in about three quarters, it is slightly inferior, and the remaining one quarter may be set down as bad. Gujarati is the language of the whole population, both Hindu and Musalman, but the Khojas and Memonas, when talking among themselves, chiefly use the Cutchi dialect. The chief manufactures of the State are cotton and woollen clothes, gold embroidered work, wooden toys and wood work turned on lathes and brass and copper utensils. The average rainfall is 25 inches, sufficient for all agricultural purposes. During the past year the ratio of births per 1,000 of population was 42.11 and that of deaths was 22.23.

His Highness exercises full civil and criminal jurisdiction over his subjects, who number 1,61,036 souls according to the last census. The area of his State is 1,024 square miles, yielding an average revenue of about Rs. 12,00,000. He pays an annual tribute of Rs. 1,10,721 to the British Government. His Highness has thought fit to introduce a change in the system of collecting land revenue in the State. For the time-honored system of recovering annual State demands of land revenue in kind is substituted the cash payment system, which seems to be popular with the cultivating classes.

The Chief is a man of studious habits and refined tastes. Everybody, high or low, can gain access to him at any time. This kind of accessibility has rendered His Highness popular among those who have to come in contact with him. He is fortunate in so far that he has a singularly gifted spouse in the person of RANI SHRI NAND KUNVERBA, daughter of the late Maharaja of Dharampore. She is a highly trained and accomplished lady, and takes the warmest interest in the educational advancement of her sex. She now and then onlives the occasions of prize-giving in the girls' schools of the State by thoughtful and practical remarks. We may be pardoned if we are tempted to quote the short but pithy advice she gave to the pupils of the Gondal Girls' School at a recent prize-giving. Her Highness expressed herself to the following effect:—

"Girls, this is the time for you to learn, you should make the best possible use of it. In ancient times many very learned ladies, such as MAITREYEE, GARGEE, LEELA, and others have flourished in our country. Keep their examples before your eyes. In the great philosophical controversy between MANDAMISHRA and SHANKARA CHARAYA, LEELA,—MANDAN MISHRA's wife,—was appointed umpire, with the consent of both the disputants. Her knowledge was so high that she was believed by the people to be an incarnation of SARASVATI or the goddess of learning. The erudition of MAITREYEE and GARGEE is well-known. Their words of wisdom are read with reverence by great pundits. Many other such instances can be cited from among our class. If their high standard of proficiency is difficult to reach, you should at least know as much of reading, writing, singing, keeping accounts, sewing, knitting, cooking and other domestic work, as is essential to your worldly requirements. Virtue and morality are equally essential—perhaps more so. For it is better to be moral and virtuous without learning than to become learned and be addicted to questionable habits. Where learning and virtue are found together, it is as good as 'gold with fragrance.' Therefore bear this in mind and zealously devote yourselves to study."

This accomplished lady accompanied her husband to Calcutta in December last, when His Highness attended the Indian Medical Congress as a representative of the Royal College of Physicians of Edinburgh whose member he is.

His Highness was elected Vice-President of the Indian Medical Association, and his deep interest in this body was shown by his presence at its inaugural meeting last year. His Highness has also recently afforded further concern in the welfare of the Association by giving a princely donation towards its Library Fund.

His Highness has three sons and two daughters, the heir apparent named BHONRAJ is twelve years old and is studying at Edinburgh, whence he will proceed to Eton in the course of a few months. His sister BAKUNVERBA, about eleven years old, is also prosecuting her studies at the Scottish capital. Her younger brother, only seven years old, will join her as soon as he is fit to begin his education.

We cannot close this memoir of so noble a member of our profession without expressing a heartfelt and prayerful wish that he may long be spared to rule his people in all prosperity, contentment and happiness—a wish that every member of our profession will repeat.

THE Indian Medical Record

1st March, 1895.

ANNUS MEDICUS, 1894.

As has been customary with it, *The Lancet* in its final issue of 1894 has favored its readers with an interesting compendium of all matters medical that have been transacted, or which have transpired during the preceding twelve months; and we take this early opportunity of condensing the same for the benefit of our readers.

In regard to *Medicine*, the attention of the whole world has been directed to influenza; and although the address of SIR GRAINGER STEWART before the British Medical Association showed that there are many lessons to be derived from the recent pandemic, there has not, on the whole, been much new light thrown on the nature of this disease. Though evidently due to a micro-organism, it cannot be accepted that the bacillus of PELLEFFER is the cause. We have, however, learnt something of the complications and sequelæ of the disease; and the investigations of Dr. PARSONS and of the Collective Investigation Committee of Germany have taught us much concerning the progress and spread of the disease. The Budapest Congress afforded the opportunity of gathering the experiences of all countries in regard to diphtheria, the KLEBS-LOEFFLER bacillus theory of which has been accepted; and the value of the antitoxin serum, as expounded by M. ROUX, is engrossing the attention of the clinical and pathological world. The investigations of Drs. MONCKTON, COPEMAN and KLEIN have verified the value of vaccination as a prophylactic for small-pox. KITASATO discovered, during the China plague of last spring, a bacillus which appears to be the cause of the disease. A monograph by Dr. OSLER and the discussions at the British Medical Association bear testimony to the value of cold in pyrexia and in typhoid fever. Surgical intervention in perforating gastric ulcer, a system of baths and exercise in the treatment of chronic heart disease, the use of bone marrow in pernicious anemia, and intra-laryngeal injections in pulmonary diseases are among the therapeutic successes of the year; while the clinical and pathological contributions are the study of albuminuric ulceration of the bowels by DICKINSON, RINGER on cardiac valvular disease, and COLEMAN on color hearing. The collected essays of SIR W. GULL, the clinical lectures and essays of SIR W. JENNER, SIR ANDREW CLARK on "Fibroid phthisis," CROCKER'S "Atlas of skin diseases" and CRIGHTON'S "History of epidemics in England" are some of the many additions to medical literature.

Surgery.—The tendency in the treatment of operation wounds has been towards asepsis as opposed to antiseptics, and the use in consequence of sterilised instruments and dressings. Abdominal surgery has progressed, resection of portions of diseased or injured bowel has often been successfully practised. Intravenous injection of saline solutions, chiefly where fall of blood pressure is due to excessive loss of blood and not merely to collapse, has been growing in favor. Mr. PITT'S successful ligature of the internal iliac artery by the transperitoneal method is

the first operation of its kind in England. In treating aneurisms of the extremities, attempts have been lately made with good results, to ligature the artery nearer the aneurism and not at a distance from the sac as taught by HUNTER. The ligature at a distance was advised, as there the vessel is more likely to be healthy than close to the aneurism, but the operation close to the sac has been attempted, as there is in it less likelihood of a return of pulsation, and as in amputations in elderly persons the arteries are often found to be extensively diseased where they have to be tied, and yet secondary hæmorrhage in those cases is rare. The treatment of aneurism by the method of ANTILLUS, ligaturing the vessel on both sides of the aneurism and excising the sac, has also been reverted to. Modern surgery has also lessened the mortality from strangulated hernia.

Obstetrics and Gynecology.—Symphysiotomy is gaining ground. In all cases that recovered from the operations performed (and the mortality has been very low) the consolidation of the pubis was sufficiently firm for the patients to walk about easily by the twentieth day. Professor PINARD concludes that symphysiotomy should be preferred to the induction of premature labor, but ought to be performed in those cases only where the separation of the bones to not more than seven centimetres will allow the passage of the fetal head at term. Professor LEOPOLD thinks the operation especially unsuitable for primiparæ, and also that the hæmorrhage during the operation and the lacerations of the vagina might occasion as much difficulty as the after-treatment. The operation is not favorably regarded by English obstetricians, but a large number of successful cases are reported from the Continent and in America. The radical treatment of uterine fibroids has of late given much better results than formerly, whatever the method of operation performed. Dr. HAULTAIN is in favor of the electrical treatment of uterine fibroids and subinvolution; but Dr. BERRY HART pronounces it tedious and disappointing. The general opinion of the Obstetrical Society of Edinburgh was decidedly against vaginal antiseptic douching as a routine practice during the puerperium.

Therapeutic Progress.—The event of the year in this direction has been the introduction of antitoxin serum. Papers have been read during the year upon the treatment of tetanus by antitoxin; and thyroid extract has been used in exophthalmic goitre, in sporadic cretinism, in lupus, psoriasis and malignant Indian syphilis. Bone marrow has been given with good results in leucocythæmia and pernicious anemia. Morphine, especially given with digitalis or strophanthus, has been found useful in heart disease. Apocynum cannabinum is said to have actions similar to those of digitalis. Arsenic in anemia, lemon juice as a hæmostatic, digitalis in chilblains, douching the nostrils with perchloride of mercury or boracic acid solutions in whooping cough, turpentine in incontinence of urine and senna in the incontinence met with in locomotor ataxy, have all been accorded a certain amount of value; epilepsy has been combated with bichlorate of soda and with adonis venalis given with bromides, and atropine during the intervals when bromides are not used. Phosphoric injections and iodides in locomotor ataxy, glycerophosphates in nervous depression, chlorobrom in sea sickness in conjunction with a

cholagogue pill and spare dry diet have been advocated, and lactic acid in the treatment of corneal ulcers, pentol as an anæsthetic less dangerous than chloroform, and neurodin and thermidin as antipyretics, are a few of the many additions to therapeutics that have been recorded.

Dental Surgery.—The Council of the British Dental Association has made vigorous efforts to put a stop to dental surgeons advertising themselves. Several deaths under chloroform used during the extraction of teeth have led to its employment in such operations being denounced as unjustifiable. Ceryl has taken the place of chloride of ethyl as a local anæsthetic. The administration of oxygen and nitrous oxide gas has been rendered more practicable by the introduction of Dr. HEWITT's portable apparatus. A connection has been supposed to exist between pyorrhea alveolaris and gout, and successful results have been claimed in the treatment of the former with lithium bitartrate internally given. Bridge work has had its place more clearly recognised.

Ophthalmology.—Egyptian ophthalmia has been further investigated by Professor FUCIS of Vienna, who has concluded that it is not a simple but a complex disease being in fact trachoma combined with active suppurative conjunctivitis or blepharorrhagia; the latter disease being the more dangerous of the two. It is remarkable that the gonococcus or microbe of gonorrhoeal ophthalmia is constantly present in the discharge. Many researches have been made upon the nervo-muscular apparatus governing the movements of the pupil. KNAPP has given a powerful stimulus to the method of extracting cataract without iridectomy, and adopted this plan in 91.4 per cent. of his last six hundred cases. The removal of the lens in cases of high myopia has been practised by PELGER and FUKALA. One eye alone should be operated on and the degree of myopia should at least require for its correction a lens of ten dioptries. Electrolysis and massage of the eye have been tried with partial success for the treatment of detached retina. At the Ophthalmological Congress in Edinburgh, LANDOLT warmly advocated the advancement of the yielding or less powerful tendon in strabismus in place of the treatment by tenotomy of the stronger tendon usually adopted. RUBENS and KOENIG have shown that the fovea centralis is color blind for the perception of blue.

Forensic Medicine.—A series of cases arising from carbolic acid poisoning were under treatment at the Royal Free Hospital between June and September, and eight deaths were attributed to this agent. Chloroform has been responsible for more deaths than the aggregate number referable to nitrous oxide gas, ether and A. C. E. mixture. The taking of the oath with the uplifted hand has made progress, and Mr. JUSTICE COLLINS recognising the danger lurking in the oft-kissed book, ordered the destruction of a Bible that an alleged syphilitic witness had kissed.

Anatomy and Physiology.—The modern methods of staining and mounting specimens for microscopic examination, and the use of very high powers, together with improvements in the application of photography to the microscope, have led to wonderful advances in our knowledge of the structure of true cells. A new method of discriminating and numbering the leucocytes of the blood has been described by Elisholtz which consists in adding

to specimens of blood a mixture of glycerine, eosine and gentian violet. The physiological action of allied compounds has been found to be in intimate relation to their chemical qualities, since the action augments with the magnitude of the molecular weight. The relations of the vermiform appendix and of the ureters have been carefully worked out. The interchange of gases in respiration have been shown to remain comparatively unaltered, notwithstanding great variations in the composition of the surrounding air. Professor HILL has shown that the position of the body materially alters the blood pressure in the carotid, and has thus established the influence of gravity on the circulation. Dr. RUSSELL has found that the hemispheres of the cerebellum are independent of each other, and that the impulses generated in each travel either to the spinal cord or to the cerebrum. It has been demonstrated that nerves are capable of acting on muscle and producing rapid rhythmic contractions in it even when it has passed into the condition of calaverie rigidity, for by employing the myophone it can be demonstrated that the excitability of the nerves persists as long as ten hours after death; whilst BROWN-SEQUARD has found that muscles affected with rigor mortis can contract and relax alternately though comparatively slowly. LOEB has shown that each part of an ovum does not form a special part of the embryo, but that fragments of the fully segmented ovum of one of the siphonophora may give rise to young and perfect animals.

The General Medical Council.—Held two statutory meetings: one in May and one in November. At the first meeting it was resolved that the examiners in surgery of the Apothecaries' Society, who are appointed by the Council, should be appointed for five years only, one retiring annually. The Council resolved to give a warning to certain institutions urging them to reconsider the terms in which the diplomas granted to midwives were framed. The names of seven practitioners were erased for professional offences. At the second meeting it was resolved to take proceedings against persons continuing to use the title attaching to qualifications of which they have been deprived by the licensing bodies. It condemned at this second meeting the issue of diplomas to midwives by the Obstetrical Society and other bodies, and intimated that from the present date it might be regarded as "infamous conduct in a professional respect."

Honors to Medical Men.—Surgeon-Major ERNEST HAROLD FENN of the Coldstream Guards was appointed a Companion of the Indian Empire, Sir F. SKYMOUR HADEN, Sir JOHN BUCKNILL, Sir THOMAS GRAINGER STEWART, Sir JAMES RUSSELL and Sir ARTHUR BENNICK are the medical knights that were created on the occasion of Her Majesty's fifty-fifth birth anniversary. Sir JAMES MOULT was made a Knight Commander of the Bath; Deputy Surgeon-General W. GEORGE MANLEY and Fleet Surgeon W. WHITE received the Companionship of the same order. Dr. ROBERT GRIEVE, Surgeon-General, British Guiana, received the Companionship of St. MICHAEL and St. GEORGE. Surgeon WALTER BOWDEN received the distinguished service order. Sir JOHN WILLIAMS received a Baronetcy, and Dr. LEANDER JAMESON the Companionship of the Bath.

**THE REPRESENTATION OF THE EURASIAN AND
ANGLO-INDIAN ASSOCIATION TO THE
GOVERNMENT OF INDIA ON
THE MILITARY ASSISTANT
SURGEONS' SERVICE.**

In the *Eurasian and Anglo-Indian Recorder*, we find the following extract from a report of the proceedings of a special meeting of the Board of Directors of the Eurasian and Anglo-Indian Association, held at the Doveton College, Calcutta, on the 4th February, 1895:—"In speaking to the notice against his name, Dr. JAMES R. WALLACE referred to the request made to him by Surgeon-Major-General W. R. RICE, M.D., C.S.I., the Surgeon-General with the Government of India, that the opinion of the Board of Direction be submitted to the Surgeon-General "as to whether European and Eurasian lads, who have passed the Entrance Examination of an Indian University, could be obtained in sufficient numbers to meet the need for candidates for the Military Assistant Surgeons' Service." Dr. WALLACE said the Government had given tangible proof of its appreciation of the loyalty, devotion and ability of this class of its servants, and had already favored them with an appropriate change in their professional designation, besides promising them a suitable increase in their salary. Dr. WALLACE said that it was desirable if any raising of the standard of preliminary education was adopted, that such a measure would of necessity entail a greater expenditure on the education of lads who sought admission into the medical service, and that the Board under the circumstances should seek from Government some commensurate advantage for the community they represent. He would suggest that a full professional training, a recognised degree in medicine and enhanced pay for the various grades be asked for by the Board in an immediate representation to Government on this subject.

Mr. C. E. DISSENT supported Dr. WALLACE's views, and the opinion of the meeting was expressed to the effect—"that the Government would find no difficulty in getting lads who had passed the Entrance Examination in sufficient numbers for the needs of the Military Assistant Surgeons' Service."

It was resolved that Dr. WALLACE and Mr. DISSENT be constituted a Sub-Committee to prepare an immediate representation to Government through Dr. RICE on the subject, and that it be circulated for approval."

The following representation prepared by the Sub-Committee was drafted and circulated to the Directors, and after receiving the cordial approval of the majority, was signed by the President, Mr. W. H. RYLAND, and submitted to Surgeon-Major-General W. R. RICE, M.D., C.S.I. on the 18th February 1895.

From THE PRESIDENT,

Eurasian and Anglo-Indian Association.

To SURGEON MAJOR-GENERAL W. R. RICE, M.D., C.S.I.,
Surgeon-General with the Government of India,

SIR,

DR. J. R. WALLACE, one of the Directors of this Association, having communicated your request to be favored with an expression of the opinion of the Board of Directors of the Eurasian and Anglo-Indian Association on the question "whether Government could obtain young

men of the domiciled European and Eurasian community who have passed the Entrance Examination of an Indian University in sufficient numbers to meet the demand for candidates for the Military Assistant Surgeons' Service," I have the honor to state for your information that the Board of Directors having given all the circumstances connected with the present system of recruitment for this service their careful consideration, are of opinion that the Government of India would find no difficulty in obtaining a sufficient number of suitable candidates for this service who have passed the University Entrance Examination, and that the raising of the educational standard for admission into this service would lead to its recruitment not only from a better educated but a superior class of men. The Board of Directors of this Association have recognised with much pleasure, the appreciation by Government of the services of the Military Subordinate Staff as evidenced by the recent improvement of their status and professional designation, as well as the promised enhancement of their salary. The Board also observes with satisfaction the loyalty and cheerful obedience which have always been evinced by the men of this service under varied and trying circumstances, and they feel that in the Military Assistant Surgeons, the devotion of the Eurasian and Anglo-Indian community to the Government has been signally exemplified. Influenced by a sincere desire to aid the Government of India in any plan by which the services of the community which the Board represents may be utilised with advantage to the State, the Board would seek to approach the Government of India with the following suggestions for the improvement of the Military Subordinate Service, having special regard to the circumstances that the improvements now suggested will relieve the Government of the financial burden of maintaining a paid Military student class, and will offer an easy means of suitably increasing the salaries at present paid to the various grades of Military Assistant Surgeons which Government has already generously promised to raise.

The suggestions are:—

1. That the educational standard for admission to the Military Assistant Surgeon class be, and continue to be, the Entrance Examination of an Indian University. It is considered that the raising of the standard of general education preliminary to a professional training will undoubtedly lead to higher professional ability and efficiency.
2. That the course of medical study be extended to five years and that it be the complete university curriculum for the degree of L. M. S. It is felt in this direction that as Military Assistant Surgeons are largely utilised in the medical charge of civil stations and other independent and important charges, the Government should place its servants of this class in a position in which their professional qualification would be unassailable, and this it is believed can best be done by insisting on a complete and thorough medical education, such as graduates receive, and by their securing the hall-mark of our Indian universities.
3. That students of the Military Class be specially permitted by an enactment of Government, and compelled by a rule of the service, to appear for and obtain the

diploma of L. M. S. of an Indian University, without which they should not be considered qualified for appointment as Military Assistant Surgeons. Inasmuch as the Indian Universities require that candidates for the degree of L. M. S. shall have passed the educational standard of the First Arts, it will be necessary for Government to arrange that its military students be permitted to appear for the L. M. S. examination, and if successful, receive the L. M. S. degree. The possession of a recognised diploma of an Indian University by its Military Assistant Surgeons, will be of obvious advantage to the State in fixing the standard of qualification needed for the service in those higher posts where their independent judgment and care of the sick are often called into action.

4. That having obtained the diploma of L. M. S., such candidates be appointed Second Grade Assistant Surgeons on a salary of Rs. 85 per mensem, thus abolishing the present Third Grade Assistant Surgeons.

5. That admission to the Military Assistant Surgeons' Class shall involve the following requirements:—

(a). Eligibility under the existing service regulations as regards physical fitness, age, parentage and character.

(b). That candidates shall have passed the Entrance Examination of an Indian University.

(c). That successful candidates shall be admitted into the Military Assistant Surgeon Class, and shall be educated free by Government for five years.

(d). That they shall board, lodge, clothe and provide themselves with necessary books and appliances for study at their own expense and that Government will bear no part of the cost of their maintenance during their five years course of study.

(e). That candidates, or their guardians on their behalf, shall bind themselves to serve Government for a term of years, in return for the free education given by Government, and should a candidate refuse to enter Government service after completing his medical education, he shall be liable to pay the sum of Rs. 1,000, to reimburse the State the expenses of his education.

6. That from the savings effected by Government by the abolition of monetary, residential and other forms of support, as at present afforded to the Military Class, a portion be appropriated for raising the present grade salaries of Military Assistant Surgeons, thereby redeeming the promise of Government, and at the same time rendering the service more attractive to the better class of men who under its altered conditions would readily seek admission to it.

The Board of Directors trust that this communication may receive your kind, considerate, and early attention.

I have the honor to be

Sir,

Your most obedient servant,

W. H. RYLAND

President, Eurasian and Anglo-Indian Association.

This document is of considerable import and known not only to the Military Assistant Surgeons' Service, but to the whole domiciled Anglo-Indian and Eurasian community of India and Burma, which form the recruiting ground for its ranks. It involves a whole-sale revolution

in the conditions of admission into the service, and demands therefore the serious attention of the community whom it concerns.

We have been asked,—Is the game worth the candle? And we are inclined to answer both yes and no. Yes certainly and assuredly, if the Government makes the service sufficiently attractive in its pay and prospects. The negative has already been proved to the Government in the difficulties that have presented themselves in obtaining a lower grade of candidates than those referred to in the representation now before Government. As the service now stands, it offers poor prospects to the standard of men who at present tardily seek admission to its ranks, and of this fact the Government has had abundant evidence. If candidates are to be found for the service, even as it stands, we feel that the State ought to fulfil its pledges and enhance the meagre emoluments of the various grades and at the same time remove the term *SUBORDINATE* from the Service designation. Despite the SHAKESPEARIAN dictum, "What's in a name," we venture to say with all earnestness and truth that the gift of the altered appellation from Apothecary to Assistant Surgeon has been robbed of nearly all its grace and gratification by the reintroduction of the term *Subordinate* as a service designation. Consistency and policy both urge the need for expunging the offensive name "subordinate." We would simply ask those in authority to shew us a single subordinate officer of the Commissariat, Public Works, Military Works, Ordnance, Engineers or other State service, that signs himself a member of a *Subordinate* Service. They are all members of the "Army Commissariat Department" or the "Public Works Department," and so also are Assistant Surgeons members of the INDIAN MEDICAL SERVICE, subordinates though they are, as their class designation sufficiently and emphatically implies. We would earnestly appeal to Surgeon Major-General RICE to remove the term *Subordinate* as the official designation of this service. With this galling stigma abolished and the salaries—chiefly of the lower grades—improved, we are in hearty accord with the suggestions of the Eurasian and Anglo-Indian Association that the educational standard of admission be elevated to the University Matriculation test, that the professional course be enhanced to five years, and that the professional test for the rank of Assistant Surgeon, Indian Medical Service, be the L. M. S. degree.

Such changes, if generously sanctioned by the Government, would be a boon to India in more ways than one.

With regard to the abolition of the *paid* military class, and the enhancement of the salaries of the various grades, we have been asked to respectfully and earnestly entreat of the Government to allow the payment of the military class to remain unaltered if it can possibly do so, as the aid thus given by the State to the Anglo-Indian community is the *only* instance out of many forms of state support given to other Indian communities. Substantial precedents have been brought to our notice, for retaining the present system of *paid* military students, but for the present we would simply urge the argument that the Government can, with a greater show of reason and justice, maintain a *paid* class under the altered conditions of a higher degree of classical and professional requirements as a *paid* *pro quo* than under the present regime, where less is given for the money expended. And

with regard to the enhanced salaries, we would, with all grateful appreciation for its generosity and liberality, respectfully remind the Government, that its own recommendations for the enhancement of the salaries of the lower grades were as follows:—2nd grade Assistant Surgeon (the third grade being abolished in the same recommendations) Rs. 125—over 7 years in this grade, Rs. 125—1st grade Rs. 150, over 5 years in this grade Rs. 200.

We are well aware of the financial pressure under which the Government of India labors at present, and we know also the urgent need there is for augmenting the numbers of the Military Assistant Surgeons' Service to meet the exigencies of the State, yet we feel that as long as all other European subordinate services offer better attractions to our youths in the way of salary and prospects, recruitment difficulties will remain, though the Government may, without much expenditure, remove the difficulties by enhancing the salaries of the lower grades of Military Assistant Surgeons and enforce reform by demanding higher educational and professional attainments as a *quid pro quo* for the improvements it makes.

We would earnestly invite the co-operation and help of the sister associations in other provinces and presidencies in this matter, so as to aid the Government in solving the difficulties which surround the urgent reforms that are so pressing needed, both for the service and for the community they represent.

COMMENTS AND NEWS.

THE REPRESENTATIONS OF THE INDIAN MEDICAL ASSOCIATION ON THE GRIEVANCES OF CIVIL ASSISTANT SURGEONS AND HOSPITAL ASSISTANTS.

WHILE the press throughout India has spoken with no uncertain sound its unqualified approval of the suggestions made by the Indian Medical Association to the Government of India for the redress of the grievances of Civil Assistant Surgeons and Hospital Assistants, and while it is gratifying to learn that these representations have been forwarded to the Government with the cordial recommendations of its chief medical advisers, it is worth a good deal to find Indian politicians of every shade of opinion so thoroughly on the side of the Indian Medical Association in commending its action as politic and to the point. We find the HON'BLE MAHENDRA LAL NINCAR, M.D., C.I.E., in the *Calcutta Journal of Medicine* after reproducing *in extenso* the representations of the Association, writing thus:—"We have great pleasure, in this number, to give publicity to the representations of the Indian Medical Association, 'on the grievances of Civil Assistant Surgeons and Civil Hospital Assistants.' They do not pray for a commission of inquiry, but they offer certain suggestions to Government for the improvement of the status, pay and pension of both these classes of public servants.

With regard to the Assistant Surgeons, we repeat that their grievances are real and sorely felt, and unless remedied the deterioration of the service will follow as a necessary consequence. Neglected, ill-paid, with no prospects (except the wretched and miserable Rai-Bahadurship, which has ceased to carry honor or distinction) this class of public servants are maintaining up to the present day the high standard of knowledge and skill, of devotedness in their official career, of deep sympathy with suffering humanity, and of loyalty to Government, which have distinguished them ever since their

creation by the establishment of medical colleges in India on the model of the West. But the times are terribly hard, and it would be too much to expect that with bare necessities and half-starved families, these men would continue to maintain their position as they have been hitherto doing.

"We are entirely in accord with the suggestions made by the Indian Medical Association, even as regards the changes in designation. For, Shakespeare notwithstanding, there is much in a name, and we have no doubt that the changes suggested are what the real positions of both the Assistant Surgeons and the Hospital Assistants legitimately demand, and would, with increased emoluments, help in improving their status and their quality as well. In our opinion Government cannot do better than adopt the suggestions which will, it is true, entail some additional cost to the State, but this will be more than compensated for by considerably improved efficiency of the services in question. It would be bad policy, on the part of Government, and uneconomical in the long run, to create discontent in the minds of two most useful classes of its servants."

DOCTORS MAY KILL IN SOME CASES!

THERE are few journals, lay, religious, or professional, which will not join *The Indo-European Correspondence* in protesting against the suggestion of the *Civil and Military Gazette* that, in some instances, "an exception may be made to the salutary rule that a doctor's mission is to cure, not to kill." The *Gazette* is of opinion that before long there will be a "legal enactment authorising medical men to take life in certain cases." The astounding absurdity of such a proposition leads us to imagine that our civil and military contemporaries was cracking a grim joke against the medical and religious sections of Christendom. He thinks the cases and the conditions in which, medical men may put an end to the existence of suffering humanity can be infallibly recognised and categorically laid down and defined. Medical men can however only prognose favorably or unfavorably; and although in a few extreme cases we may be able to positively anticipate a fatal termination, yet there are a very large number of cases presenting the most unfavorable aspects, and which, according to our limited mortal ken, appear to be in the most hopeless conditions, and which withal mend and recover. The ever-increasing additions to medical science tell us that many diseases which though now regarded as absolutely fatal or incurable may, in a few short years, come within the scope of medical relief and cure. Are we then to seriously entertain the idea that, because our limited knowledge of the mysteries of life incline us to the belief that such and such a suffering mortal is incurably ill, his life may be speedily terminated with benefit to himself and to others? Had such a preposterous enactment been made a few years ago, how many persons who are now in health and vigour, or who are at least leading lives of usefulness and activity may have been consigned to untimely graves? Is it not by acting on the principle of "while there is life there is hope," and by the dogged perseverance of medical men even in the apparently most hopeless cases that discoveries, either made by chance or scientifically deduced, have been effected, giving relief and life to the sufferers and to those who may be similarly affected in the future? It is however quite unnecessary to give any prolonged or serious consideration to the suggestion so surprisingly put forward by our contemporaries, for no Christian Government will ever commit itself to such an enactment to persuade medical men to determine whether their unfortunate patients are to be allowed to take their chances of living or to be hurried into eternity.

THE UNCOVENANTED MEDICAL SERVICE.

A correspondent, with the nom de guerre "MABAGRASS," writing to the *Indian Daily News*, begins by certifying former letters on the subject by "A. I. Bala," "M. S., M. D. C.," and "A member of the Uncovenanted Medical Service," respectively, and then goes on to say, "the subject-matter of these three letters however refers to the Uncovenanted Medical Service." The Assistant Surgeons referred to in the third correspondence's letter, the latter does not seem to understand are all university graduates which is NOT the case with all members of the Indian Medical Service which, after admitting he is a member of, the correspondent is questioning eulogies. These Assistant Surgeons are quite as capable of doing justice (in civil appointments) to their position as many members of the Indian Medical Service. "MABAGRASS" does not wish to be understood that the Indian Medical Service has no merits.

He then goes on to give a short history of the inception and present condition of the Uncovenanted Medical Service. It was started, he says, in 1867—with the object of creating appointments in the various medical colleges in India, and other uncovenanted appointments, for civil medical relief, throughout the country. It was created as a counterpart of the uncovenanted branch in the Revenue, Judicial and other departments of the public service, to give scope to local talent only. But since the carrying out of these objects has been placed in the hands of military medical officers, the appointments have been wrested and smuggled into what are now said to be *privileges* of the service. Further, the Uncovenanted Medical Service is mainly recruited by *imported* talent, and thus the Uncovenanted Medical Service has to "all intents and purposes, become a dead-letter."

The Indian Medical Service has no claim to absorb civil posts, or to engage in private practice, as is now the case. The Indian Medical Service covenant is a purely *military* one; it neither guarantees nor makes mention of any civil posts for its members.

In conclusion "MABAGRASS" believes the time is not distant when the present condition of the working of the Uncovenanted Medical Service will be brought to light as one of the greatest scandals of the day; that local talent will be recognised by Government, and the claims of the local profession will have to be listened to. He reiterates the fact that Indian medical graduates have proved themselves in every way the equals of their *Western* brethren, and are in no way behind them. But it is only through jealousy and selfishness of their being *locally* trained, they are subjected to such "monstrous and unbecoming degradation," against which the local profession and the people of this country should protest.

ADDRESS TO DR. ERNEST HART BY THE MEDICAL PROFESSION OF HYDERABAD.

AFTER welcoming DR. HART to Hyderabad, the capital of the Nizam's Dominions, an address given him by the people adverts to the fact that, under his editorship, the *British Medical Journal* has secured 15,000 members and 18,000 readers all over the English-speaking world. Through its influence the bulk of medical opinion is guided, while the large number of members is but the public expression of confidence reposed in him by the profession. The *Collective Investigation Record* of the Association owes its origin to DR. HART's untiring labors. His *Essays on State Medicine* have a wide influence, and especially his works on the *Compulsory Notification of Infectious Diseases* and the *Nursing of Cholera, its diffusion and extinction*. DR. HART has also labored for the good of the profession, and has con-

tinued to reduce the abuses and defects found therein, bringing to light all cases of individual delinquencies and breaches of medical ethics. The works which have been guided to a successful termination through his influence are sanitary reform, the mitigation or arrest of infectious and contagious diseases, the intimate connection between polluted milk and enteric fever, diphtheria and scarlatina, (as being the first to point out this connection) ameliorating the sanitary condition of the poorer classes in England, as Chairman of the Parliamentary Bills Committee, he has effected the introduction of notification and additions to the sanitary law of the realm. Lastly, DR. HART has displayed great ability and judgment in dealing with the most important question of the connection between the pilgrimage to Mecca, and the dissemination of cholera throughout the civilised globe. This is certainly amongst the greatest undertakings of the medical profession of the 19th century. This subject was dealt on at length in the address coupled with DR. HART's special fitness to carry his mission to a successful issue. With the address was presented a silver casket. DR. HART replied in an exceedingly graceful and agreeable little speech in which he referred to the insignificant reception accorded him, and alluded to the special cause of his visit, the introduction of sanitary reform to enable pilgrims to perform the sacred duty of visiting the holy city without the risk of cholera.

INFANT NEGLECT, INSURANCE AND MORTALITY.

THE more closely we examine the practice of child insurance the less there is in it to commend it. Notwithstanding the fact that illness and disease are far more prevalent during child-life than in later years, it does not by any means follow that DEATH is their natural and certain outcome in each case. Indeed if properly tended, nourished and promptly treated when ill, which is now possible for a mere pittance, there is great hope of infant life. Life, rather than death, should be the natural desire of each parent for its off-spring. The loss, even pecuniary, entailed by an infant's death is so incalculably small, and the funeral arrangements and expenses connected therewith so simple and trifling, that they could easily be met by the poorest family brought up and maintained by thrift and honest labor. Necessity for insurance of child-life therefore, to recover such a pittance, is quite superfluous. But the persons who seek such insurance are prominently characterized by their neglect towards their off-spring and a self-indulgence, which is not less criminal. During one month over 4,000 children were subjected to cruel treatment, and the organ of the *National Society for the prevention of cruelty to children* reported that over one-third of that number were insured. In face of such facts, and in order to reduce to a minimum the evils of infant insurance, drastic reforms should be resorted to, such as (1) "the sum insured should no more than discharge the bare cost of funeral arrangements, and (2) evidence of such criminal neglect or mismanagement as might account for a child's death, should disqualify for the receipt of the sum insured."

Medical men would do well to refuse scrupulously and absolutely, to grant the customary death certificate in cases where they believe such ill-treatment or mismanagement has occurred.

ABOUT FLEAS.

EVERY ONE knows everything about the flea, but few indeed know anything concerning it, beyond its bite, its jump and its disappearance. Barely an animal exists but has its own particular flea to feed, yet they all belong to the same species and with trifling differences as to its habitat and habits, have practically the same life history, and not one of them can come into existence if there is no dust about for the larva to

and upon. The first lays from 4 to 10 and eggs (0.5 mm long) which hatch within endless grubs. These grubs consist of 12 white segments, each provided with long sensory hairs, and the last one also carries 2 stiff spines to assist locomotion. The head appears as a yellow sphere crested with a small sharp spike and fitted with a pair of strong mandibles by which the larva feeds on decaying animal and vegetable refuse. On or about the 15th day after birth the larva encloses itself in a silken cocoon within which it undergoes profound changes, and on the 18th to the 19th day emerges as the familiar and very lively insect, which is only an occasional parasite that makes use of man and other animals mostly as a lender or provision store, and seldom lives beyond 28 months. The varieties most known of these pests are:—*Palae irritans* affecting man, *P. serraticornis* the dog and cat; *P. artem*, birds; and *P. ginsengophalus*, the hare and rabbit; but strange to say the monkey has no flea peculiar to it. The fleas that attack bats, rats, and mice, belong to an entirely different genus (*Typipylus*) in which the eyes are either absent or very small and the body longer than in the *palae*. Moles and humble bees are associated with a third genus (*Hydrirapilla* *abrupticeps*) whose body is large (3.5 to 5.5 mm) and particularly hairy, while the head which is short and rounded is devoid of eyes.

DR. HART ON PILGRIMAGE.

DR. HART addressed a large gathering in the public gardens of Hyderabad. The Minister presided, while the Resident, the leading nobles and religious dignitaries were present. After being introduced by the Minister, DR. HART addressed the meeting, his address being ably translated by SYED ALI. He began by giving a historical sketch of cholera in England, Europe and India. Cholera, he said, was due to impure water and bad food and therefore preventable. The pilgrims to Mecca, owing to bad sanitary arrangements, spread the disease all over the world. Eight hundred thousand pilgrims visit Mecca annually, but absolutely nothing has been done to ensure sanitation, nor the comfort of the pilgrims. There is quarantine at Kanara, Jukla and Laila, but no accommodation whatever. They drink filthy water and eat bad food—the main thing happens on their line of march—putrifying carcasses of man and cattle lie the road and contaminate air and water. At the halting stations again there are no sanitary arrangements, and pilgrims die of cholera in thousands. In introducing sanitation, no interference need be made with religious customs. A resolution was carried to urge the Nizam's Government to send out qualified Mahomedan doctors with pilgrims to submit a report of the conditions to the Nizam to address the Sultan of Turkey for co-operation. The object of the scheme being to help the Mahomedans and not to interfere with the sacred Lemken well, and hence it should secure the support of the Mahomedan world.

THE DISSEMINATION OF CHOLERA BY RAILWAYS.

SURGEON-MAJOR LEWIS has made an enquiry into the alleged influence of railways in disseminating cholera. He finds that there is no ground for such a belief; for were it so, cholera would be manifested much more frequently and would more rapidly be carried about from place to place than it was in pre-railway days. (An individual case or so may be thus carried, but it does not bear any influence on the after-course of the epidemic). Then again cholera would invariably follow the lines of railway and be more frequent and more severe there than in districts far removed—but such is not the case; the outbreak, as a rule, proceeds in a very erratic and irregular manner. On the other hand, Dr. LEWIS

believes that railways exercise highly beneficial influence in preventing and checking the dissemination of cholera for two reasons:—

(1) They are "a great safeguard to those who are there in order to escape from an infected locality."

(2) "They are the quickest means of dispersing a large collection of people from any place in which cholera has appeared."

In explaining the fact that when pilgrims depart to thousands of villages from infected districts and on returning most of them escape, only a few hundred cases taking the disease, he points out that "the local epidemics are due to some cause peculiar to the villages affected, and not common to the thousands that escape."

THE BENGAL HEALTH SOCIETY.

LADY ELLIOTT called together a meeting of the above Society at Belvedere. It was resolved that the said Society should not be affiliated to the National Health Society, because, while the objects of the two are the same, the conditions under which they work are widely different. The Bengal Health Society is essentially a provincial one, as its name implies. Mrs. WHEELER (Inspector of girls' schools for Bengal) was appointed Secretary, Dr. JOUBERT, Honorary Treasurer (*pro tem.*), while Mrs. GANGULI, M.D., is to prepare a treatise or brochure on the management of children, adapted to the needs and understanding of Bengalees. Dr. GANGULI will revise certain placards of the English Health Society adapting them to India. They will be hung up in zenanas and schools and will in addition be made as attractive as color and design can make them, besides being instructive.

Surgeon-Colonel HARVEY gave some very valuable hints as to the best way of carrying on the work, and suggested that pamphlets on domestic sanitation, water, the care of milch cows and the prevention of small-pox and fevers, &c., should be simply written, translated into Bengalee and widely distributed.

The Society may indeed be well congratulated on its plucky effort in beginning a warfare against centuries of accumulated ignorance and prejudice as to sanitary matters in Bengal.

THE ARMY MEDICAL STAFF AND THE INDIAN ARMY CORPS.

It is now announced that the principal medical officers of the army corps will each get Rs. 2,000 per month. The Secretary or "personal assistant," as he will be called if on the British service—will get Rs. 150 extra per month; if of the Indian service, consolidated pay of Rs. 600 per month. This clearly shows that the Surgeon-Major Generals of the Army Medical Staff, who may be nominated to principal medical officer-ships will lose Rs. 300 each month, and, with the rupee at 1s. 4d., will, although ranking with Major-Generals, get less pay than Brigadier-Generals. In short, a Surgeon-Major-General, at the present rate of exchange of rupees, would be better off at home than in India. The misfortune that has come on the Army Medical Staff in the new organization was foretold long ago.

DEATH OF THE CHAMPION CENTENARIAN.

THAT famous veteran, Lieutenant NICOLAS LAVIN of the Grande Armée passed away at Saratoff at the age of 123 years, leaving a daughter aged 78 to mourn his loss. Born in Paris in 1763, he served as a hussar through a number of campaigns till he was taken prisoner in 1812, during Napoleon's retreat from Moscow. Instead of returning to France when liberated he married and settled down as a tenant of 500 a. Here he lived ever since, and in 1877 he celebrated his centenary with a present of 1,000 roubles.

CONSUMPTION: "BOUGHTING IT VERSUS THE CODDLING TREATMENT."

"*Beware of draughts*" is the eternal cry of most writers on health; but "air is the best medicine of all," says Dr. CHAS. E. PAGE, and throwing wide open every door and window to thoroughly ventilate the house orders the consumptive patient to camp out all the year round, so that in the fight for his life the patient may not hazard his chances by any letting up in the medicine (*i.e., fresh air*) of which he requires a *profusion* to secure a return to health. As proof of the rationality of this treatment, he cites quite a number of convincing cures and inveighs on the patient the necessity for adequate exercise, moderation in clothing, telling him to warm himself with a little shaking up rather than by a top-coat in winter and cautioning him against chills suggests that as soon as a consumptive patient comes in from his outings in cold weather, he should seek his chamber with its *always wide-open windows* and lie down with plenty of blankets for protection; but he must on no account hang over a fire for warmth or sit about, for sitting is unnatural, and the less he does of it the better as pure fresh air is *all* he requires and he cannot get too much of that even when he is "out of the woods."

NEW A. M. S. AND I. M. S. SURGEONS.

THESE lists show the positions and marks obtained at the Netley and London competitions by the following probationers who are now admitted into the service:—

| British. | | Indians. | |
|--------------------|-------|-----------------|-------|
| Harrison, W. B. | 5,052 | Milne, C. J. | 5,625 |
| Howell, H. A. L. | 4,931 | Beynon, A. F. | 4,971 |
| Lawson, D. | 4,893 | Bentley, C. H. | 4,945 |
| Steel, R. B. | 4,716 | Watling, P. H. | 4,768 |
| Proffitt, C. W. | 4,561 | Ryans, S. | 4,631 |
| Kiddle, F. | 4,188 | McMillan, J. D. | 4,531 |
| Shaddan, H. E. | 3,983 | Gwyther, A. | 4,406 |
| Whitehead, J. H. | 3,877 | Morgan, E. J. | 4,458 |
| Marrison, J. A. | 3,837 | Ward, A. E. F. | 4,391 |
| Tomlinson, L. P. | 3,744 | Carr, W. | 4,313 |
| Perry, S. J. C. P. | 3,614 | Hamilton, J. A. | 4,252 |
| Heaton, A. F. | 3,552 | McDonald, J. H. | 3,918 |
| | | Wall, F. | 3,922 |
| | | Mathew, C. M. | 3,758 |

MEDICAL COURAGE HONORED.

DR. MARY BRADFORD, an American Missionary to Persia, is about to receive the highly complimentary present of a hospital, to be conducted by herself. It is the outcome of her very courageous course during the cholera epidemic of 1892. She remained at her post through the entire epidemic. Some wealthy merchants, who recognised the heroic qualities of the lady's conduct, have undertaken to build and equip this hospital as a reward of merit.

THE MISSING LINK.

DR. EUG. DUBOIS, of the Dutch Indian Army Service, believes that he has found the missing link between *homo primus* and the anthropoid apes in some fossil remains recently discovered in the andesitic tuffs of Java. The bones consist of the upper part of a skull, a very perfect femur, and an upper molar tooth. The remains are elaborately described and figured in a quarto memoir recently published in Batavia.

A DOCTOR FOR KABUL.

ASSISTANT SURGEON AMIR SHAH of Lahore has accepted service with the Amir of Afghanistan, who was so anxious to secure him, that the doctor has been engaged practically on his own terms. In addition to obtaining his professional advice the Amir intends to utilize him in establishing a medical school at Kabul.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:—

Fateh Chand, M.B., B.S., L.D.S. (Dur.), L.R.C.P., L.M.A. (Lond.), L.M.S. (Punjab), Medical College, Lahore.
V. M. Carleton, Asst. Surgeon, I. M. S., Fort, Agra.
Ram Chandra Mozumdar, L.M.S., Asst. Surgeon, No. 1/1 Nilmoney Duff's Lane, Calcutta.
Hara Kali Sen, V.L.M.S., Asst. Surgeon, Raiganj, Dinajpur District.
Batakram Mehta, L.M.S., Baroda.
Balabhai, L.M.S., Baroda.
Dhirajram, L.M.S., Baroda.
Dhume, L.M.S., Baroda.
Miss A. M. Dunn, M.D., Baroda.
B. S. Shroff, L.M.S., Baroda.
Tafsool Hossein, Hospital Assistant, Hoolingpoorie, Jerbat.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

SHORT ITEMS.

The day is long past when children can be kept innocent through ignorance. The innocence of virtue, the knowledge that will give them power to choose the pure and good, is the only fortification that can protect them from the dangers and evils of social impurity.

It has been computed that the death rate of the globe is 66 per minute, 97,790 per day, or 35,717,790 per year. The birth rate is 70 per minute, 100,800 per day, or 36,817,200 per year, reckoning the year to be 364½ days in length.

Surgn. Lieut.-Col. F. C. Barker M.D., F.R.C.S.I., I. M. S., Dr. Behramji Naroji Dabshi G.M.C., Surgeon Lieutenant-Colonel W. McConaghy, and Surgeon-Captain Quick, I. M. S., have been appointed Fellows of the Bombay University.

Surgeon-Colonel D. O'C. Baye officiates as Principal Medical Officer, Presidency District, and will relieve Surgeon-Colonel Cleghorn in the charge of the Panjab on Dr. Rice's retirement.

We much regret to report that Mr. Burroughs of the well-known medical house of Burroughs Wellcome and Co. of London died on the 6th February at Monte Carlo from pneumonia.

Surgeon-Colonel Plicher, Inspector General of Civil Hospitals, N.W. Provinces, retires on 29th March, being succeeded by Surgeon-Colonel Warburton.

To detach a fish-bone from the throat, swallow a raw egg as quickly as it can be obtained.

Surgeon-Major J. Sykes has been given a year's extension as Civil Surgeon of Mussoorie.

Helen Lander of Bombay has passed the L.M.S. examination and has succeeded in winning the Cama gold medal.

Surgeon-Major H. Martin M.B., A.M.S., is appointed surgeon to H. E. Lord Sandhurst, Governor of Bombay.

Current Medical Literature.

MEDICINE.

The Nature and Treatment of Leprosy.

DR. H. BLISS, in an interesting article in the *American Journal of the Medical Sciences*, mentions the above subject. He has collected with reference to the presence of bacilli, 80 cases of erythematous and 5 cases of nodular leprosy.

He has found bacilli in sections of tubercles, blood drawn directly from tubercles, (not in blood current), discharges from leprosy ulcers, and spores, and some secretions (only occasionally). But he has failed to discover them in the sweat, the urine, and the general blood current.

As to the treatment of leprosy, he finds that preparations of arsenic, mercury and iodine are utterly useless, except in cases due to syphilis. The remedy which in his hands has been so pre-eminently useful is *chauliogra oil*. Although Dr. BLISS cannot assert positively that he has effected a complete cure in any single case of leprosy, yet he has seen such marvellous results—such as he was little prepared to witness—follow the proper use of the above oil, as to justify its sole employment in leprosy. If begun early in the disease (with improved diet and personal hygiene,) and continued uninterruptedly right through the three stages, it will "cure the patient in many instances." He begins with 10 minims of the oil in gelatine capsules after each meal, taken in a glass of milk, the dose being gradually increased until 1 to 2 drachms are taken daily (3 drachms daily are apt to set up diarrhoea), at the same time the patient is bathed with warm water and soap every alternate day, and the oil is warmed and rubbed all over his body and into the tubercles and maculae. Of course many cases are found to be intractable, but if begun early and continued as detailed above, it will never fail to produce notable improvement, especially in the tuberculous stage. Under it he has seen "tubercles absorbed, anaesthesia removed, eruptions disappear, ulcers heal, pulses quieted, suppleness and elasticity of the skin restored, and hope replace despair."

Symptomatology of Syringomyelia.

BRANNON reported where syringomyelia arising from syphilitic tumors of the spinal cord showed wasting, loss of motion, power and sensation and resulted in death when the post-mortem disclosed two syphilitic tumors on either side of the transverse sulcus of the cord. *The Lancet* also refers to several curious affection and trophic conditions of the joints in cases of syringomyelia, and SONNENBURG records a peculiar case where, in addition to altered sensory motor and electrical reactions, the head of the left humerus was entirely gone and the finger joints appeared to have enlarged capsules. SONNENBURG thinks that too little attention has heretofore been paid to several symptoms of syringomyelia, among which are:—paresis, diminution of the reflexes and other disturbances of the larynx which interfere rather with phonation than with respiration; unilateral recurrent palsy is more common than unilateral postural palsy; diminution of the scope of pain and the uterine sensibility frequently transitory only; of the ocular apparatus stimulating posterior spinal sclerosis and sometimes a peculiar change in the pressure sense where cutaneous appreciation of pressure is so greatly impaired or abolished that if the pressure sense is tested in the ordinary way no defect is noticed. SONNENBURG, on the other hand, referring to what syringomyelia is a neurological entity, declares that instead of being a disease it is merely a condition which may be present in various diseases of which leprosy is certainly one of the worst forms.

Early diagnosis and treatment of Whooping Cough.

M. VIGNOL thinks that so special signs exist for the early diagnosis of whooping cough. He points out that after a run of three days catarrh there sets in a peculiar, spasmodic, vibrating, piercing, persistent and irritating, but not acquisitive cough, without expectoration and more frequent at night. It is a purely nervous cough which lasts from 7 to 20 or 30 days, after which the whooping cough itself sets in with its characteristic expectorations. Though it is disfigureable, enervating and infectious, and nothing can be done to check it in the beginning, during the convulsive stage, whooping cough in itself does not kill a child. Languor, but the danger lies in pulmonary complications, which should be carefully watched for and guarded against. The rational treatment of whooping cough consists in amelioration of the general condition and is not particularly directed to the hyperaesthesia of the larynx, pharynx or nose. He advocates placing camphorated naphthalene under the child's pillow, or a napkin saturated with a concentrated alcoholic solution of carbolic acid under the bed every night, or better still to put the child to bed in bed clothes freshly fumigated with burning sulphur. He finds that 10 drops *ter die* of a mixture of twenty parts of tincture of belladonna with ten parts of extract of acacia root is fairly well tolerated and gives grand results, but he prefers giving his patients from a teaspoonful to a dessertspoonful three times daily of the following:—

Potassii bromidi 3jss, extract Star-anise 3ss, syrup 3j, which he maintains assists nutrition, alleviates the asphyctic stage of laryngeal convulsions, and diminishes both the vomiting and the number and duration of the fits of coughing.

Bruit de Diabie.

VERSTRAETEN'S researches by auscultation show that while the heart sounds can be confused through the liver substance, the heart murmurs cannot but in certain stomach ailments in which there are hemorrhages a systolic arterial murmur can be heard a trifle to the left of the middle line, and in some anemia, especially of women with chronic stomach disease, diarrhoea, phthisis—a marked venous murmur (*bruit de diabie*), which is present in the epigastrium, is heard midway between the ensiform cartilage and the navel (0.5 to 1 c.m. to right of middle line) as a continuous, blowing, wavy and often musical murmur, which is influenced by respiration and the heart's action, but is inconstant, sometimes difficult to make out, is accentuated by a quickening of the blood stream, and disappears on pressing down over the site of the vena cava.

Scleroderma an easily curable Disease.

BLISS believes that scleroderma is easily curable by persistent massage and mild facials, provided the patient and the physician were sufficiently patient, because the cure necessarily takes long before the skin becomes quite normal. He reports four cases by the method, one of them a man of 59 years of age whom he exhibited to the Wieser Medical-society Society, and in whom the sclerodermic affection, after enveloping the entire thorax, ran backwards over the scapula, taking a forward dive over the symphysis in a line caused by the pressure of a truss. Referring to this as well as to his other cases, BLISS points out that patients excited or in a nervous state often induce a scleroderma, which, unfortunately, runs, until very lately, straight under the heading of incurable diseases.

Factors producing Anæmia in Diseases of the Respiratory Passages.

CHABOY states that some of these factors are:—

- (1). Diminution of the calibre of the passages through which the air passes.
- (2). Diminution of the surface for the absorption of air, and trouble in the lesser circulation.
- (3). Fever.
- (4). Growths (cancers, &c.) in the respiratory tract.
- (5). Hemorrhages in the respiratory passages.
- (6). Pathological secretion of the respiratory mucous membrane.
- (7). Troubles set up in the pulmonary apparatus by diseases of the nose.

SURGERY.

Making and Closing "Incisions" in Abdominal Surgery.

DR. J. B. HOLMES thinks that if more attention were paid to the details required for results free from sequelæ and a trifle less "quick time in operation" than usually obtains with many surgeons, patients would seldom require a second operation for cure and would run less risk of becoming sufferers for life. His advice to the abdominal surgeon is valuable indeed, and may be briefly summarised: (1) After removing his nails from morning let the operating surgeon scrub them and his hands several times with a brush, green soap and alcohol. When thoroughly scrubbed, wash well in a hot one per mille bichloride solution, and lastly in hot sterilised water. (2) Instruments and towels should be thoroughly boiled, while pads, sponges, sutures, &c., must be perfectly aseptic. (3). Give patient a good bath all over; rub abdomen well over with turpentine, so as to liquefy any fatty deposits in the skin and then scrub well with tincture of green soap; mop dry, remove remaining fat with ether, after which wash with bichloride (1 in 1000) solution and then cover the abdomen with a wet bichloride towel (1 to 1,000): pay particular attention to properly cleansing the umbilicus. (4). Though long incisions are to be avoided if possible, there is more danger in too short incisions, and the opening should be just big enough to do the work with ease. (5). Make a clean incision with one sweep of a sharp knife, and when possible, directly in the linea alba, so as to protect against a tendency to post-operative "briths." (6) Before opening the peritoneum carefully control all hæmorrhages preferably by 1:0 sponges, ligatures being necessary; make those of the small vessels cut them short, and if pressure forceps are required, do not make them on for more than three minutes.

(7) Now make the peritoneum, with a mesh-needle, clip it with a scalpel, insert the finger into the abdomen as a guide, and slipping in the knee-bent scissor enlarge the incision in one or both directions, as required. (8) Having completed the necessary internal work, stop hæmorrhages, remove blood clots, and after thoroughly cleansing the wound bring the edges into proper apposition, so as to guard against uneven retraction of the fascia, suture with silk worm gut, the needle being passed through the skin about 0.25 inch from the edges of the wound, and after all the stitches are passed, bring the ends together and apply gentle traction before tying the knots. (9). If for any reason buried sutures are required, kangaroo tendon is preferable to any other suture as it is most rapidly assimilated and causes the least irritation. (10) After the sutures have been applied, the incision is dressed with iodoform, over which is placed a compress of sterilised gauze secured by a pad of bichloride cotton; and the whole held in place by 3 or 4 lightly applied strips of adhesive plaster of 2 inches width; a soft flannel binder is wrapped round the patient, who is then put to bed. The sutures may be removed in from 6 to 9 days.

Chronic Inflammation of the Seminal Vesicles.

DR. GARDNER W. ALLEN, believing that the various inflammations of the vesiculi seminales are analogous to salpingitis, points out that acute inflammation is almost always of gonorrhœal origin, and rarely advances to suppuration, whereas in the chronic form, which may be the result of the acute or of posterior urethral catarrh, consequent on prostatic congestion due to prolonged and repeated sexual excitement, there may be urethral discharge with shreds in the urine, vesical irritability and frequent micturition, urine containing shreds and clumps of blood and pus, disturbed sexual function with deficient erectile power and carnal desire, frequent emissions, spermatorrhœa, hæmorrhoids, vesical discharge from mæstrus at stool, spermatic colic, burning in perineum and urethra, and the various local nervous and mental symptoms peculiar to sexual neurasthenia. Unless indicated by special symptoms, internal medication is unnecessary, and the treatment consists of once in four days (for two or three months) stripping the vesicles by passing the forefinger into the rectum high enough to reach the free end of the vesicle and removing the abnormal secretions by firmly (but gently and carefully) pressing the tip of finger forwards and drawing the finger out without relaxing the pressure, or the obstructions may be dislodged by GOULEY's method of passing a sound into the bladder and pressing the vesicles against it. As too active manipulation is likely to bring on an acute exacerbation, a good deal of judgment is required to avoid over-doing.

Rachitic Deformities: Their Treatment.

ACCORDING to the observations of DR. WILLIAMS, curvature of the femur unless retarding locomotion does not require operation and though out-bowing of the legs (*ipes* or accompanied by *ankles*) before the bones are solidified, is easily corrected by mechanical measures, still forcible straightening over a solid femur is often desirable, even at the risk of causing a simple or a compound fracture; but in adults or in large children osteotomy is advisable, when the out-bowing is extreme. For anterior curvature manual fracture over a hard femur, with planing of osseous is advisable; but ap-
 plying a wire for osteotomy, see commentary as even a wire fracture may after the simple operation can be filled up by nature, while for both out-knee and in-knee osteotomy above the middle of the femur is effective, safe and speedy.

Skin Grafting.

After carefully washing the healthy granulations and the part furnishing the grafts with bichloride solution of 1 to 5,000 and 1 to 1,000 strengths respectively, W. H. MARCY describes best with distilled water. Then pressing the open surface of the skin so as to bulge the integument, he cuts off grafts of the required size and thickness. Lifting these grafts from off the blades of the scissors with a fine pair of tweezers he places them, out surface down, on the granulations to which he straps them with thin strips of adhesive plaster placed basket-wise and encloses the whole with one or two turns of a light bandage. The plaster may be removed in 10 hours when the grafts will be found to have cohered so closely to the granulations that no discharge can lift them off, and good results *always* follow this procedure.

Persistent Urethral Discharges due to Seminal Vesiculitis.

DR. EDGERS FULLER notes that about one-third of the cases are tubercular where seminal vesiculitis causes chronic urethral discharges, wherefore it is important to differentiate between the simple inflammatory and the tubercular cases. In the former, which may require from a month to a year for treatment, the prognosis is usually good, though the parts are tender, indurated and distended. The treatment consists in once a week stripping the vesicles and squeezing out their inflammatory contents into the urethra by means of the forefinger passed into the rectum. In the tubercular cases, many of which become quiescent under hygiene and internal medication, the tenderness is less and the induration more than in simple inflammations; but internal medication is chiefly necessary, as the parts resent the manipulations above mentioned by becoming more tender and indurated, thus aggravating the urethral symptoms.

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OBSTETRICS AND GYNECOLOGY.**The Decline of the Pessary.**

FURCH found it safer and easier to perform a laparotomy than to apply an accurately fitting pessary, which latter, though it heals palliatively, injures definitely by *distending* the fornix vagina so enormously that within a few hours or at most a few days after the withdrawal of the pessary the uterus falls back into its abnormal position. No eminent gynecologist now-a-days invents a pessary or advocates its use; and J. G. BLAKE, in whose footsteps hundreds are now following, writes strongly in favor of *narrowing* the vagina, dilating and curetting the cervix and uterus and shortening the round ligaments; but sees no advantage whatever in neutral fixation of the uterus and utterly dispensing with pessaries as a nuisance declares strongly in favor of dilating, curetting which alone or combined, as occasion may need, are in his mind the only true solutions up to date of the vexed problem of uterine displacements.

Treatment of Uterine Hemorrhage during the two last months of Pregnancy.

DR. W. J. BARTLY thinks that hemorrhage at this period results from (1) disease, (2) premature separation of the placenta, and (3) wounded accidents. The first of these will require special and special treatment in accordance to the disease with which it is associated. In the second case, where the hemorrhage is severe, the patient will resist to admit two fingers when the bleeding can be controlled by inducing parturition; but this cannot be done if the internal os will not admit 2 fingers or when labor is already too far

advanced to permit of version. *Fracturing* the os is necessary. Accidental hemorrhage may be controlled: (1) plugging the vagina in external hemorrhage. (2) With a small os and weak or absent labor pains keep the os *intact* as long as possible. (3) If labor be well advanced rupture the membranes and deliver as soon as you possibly can, and (4) in internal concealed bleeding or in cases, sometimes, of external hemorrhage, which cannot otherwise be readily controlled, employ *accouchement forcé* or Ponsé's operation; but in all cases use very little force and *never* hurry.

Imperforate Hymen; Imperforate Os Uteri; Hematometra; Hysterectomy.

Drs. MORTON and MURPHY report a case of a woman, aged 42 and married 25 years, who had never menstruated. Her womb seems to have hibernated till its owner reached the age when catamenia cease and then only began its duties with such gusto that she began to *swell* in the abdomen, lose flesh and suffer a great deal of pain. The hymen was imperforate, forming a cul-de-sac three inches deep and the os uteri was completely closed. Abdominal section revealed a huge tumour covered with a thick layer of grayish colored peritoneum and containing, besides 10 ounces of brown serum, a large mass of organized blood clot. This was removed and the womb, which was *shelled* out of the broad ligament had to be extirpated with its appendage. The broad ligament was sutured to the abdominal wound and the whole properly dressed. The patient made an uninterruptedly good recovery; but four months later returned to the infirmary in great pain with a very much distended abdomen from which 60 ounces of organized blood-clot had to be cleared out and she again recovered. A few weeks later she swelled up enormously for the third time and the cloatrix (of the abdominal wound) bursting a brown serous fluid escaped for some days, and she died after refusing all treatment. A *post-mortem* examination was refused.

An Obstetrical Problem.

In reply to the question as to what manner of man *physically* the obstetrician should be, DIONIS declared that he should have no defect that would shock the eye of a lady, and while being neither too young nor too old, he possess a soft voice, a gentle hand and a frame capable of withstanding fatigue. Major FRANCE declares in favor of *main de fer en gant de velours*; but other writers think that in order to not excite the jealousy of the *accoucheur* should be ugly, untidy in dress, dirty in person with a long beard and unkempt hair, gruff of voice and unattractive in manner or appearance. These practices obtained in the time of MAURICEAU, who inveighed bitterly against them as militating against common sense which maintained that it was a mistake for a surgeon of whom females were afraid by nature to make himself more feared by such expedients; for nature demands "cleanliness, cleanliness and yet again cleanliness," and the French have it that the *accoucheur* whose "finger nails are in mourning is a murderer," and modern successful gynecology declares in favor of cleanliness, tidiness, frequent ablutions, soft manners and strict attention to the petty details of parlance, habits and despatch in work.

Ectopic Pregnancy at the Utero-Tubal Junction.

A MEXICANA, aged 30 and mother of ten children, complaining of severe expulsive uterine pains and a moderate discharge of blood per vaginam, was examined by Drs. CHACON and FERRONER who discovered a tumour of the size of a small

ment attached to the left of and apparently continuous with the uterus. While her temperature ranged between 101° and 102° F. and there were other symptoms of extra-uterine pregnancy. On opening the abdomen the hæmatoma was found continuous with the left border of the uterus and underneath the Fallopian tube, while the tissues covering it were quite healthy, except at the junction of the womb and tube where they were thinned out to form two prominences each of the size of a small English walnut. After stitching the parietal peritoneum to the uterus and the thicker portion of the walls of the hæmatoma and closing the remainder of the abdominal wound, the thinned portion was ruptured by moderate pressure and the opening enlarged to give access to the sac, which was evacuated of three-fourths of its contents of clot, filled with iodoform gauze and dressed. The patient made an uneventful recovery and has menstruated regularly since operation.

Vaginal total Extirpation of the Uterus and Adnexa in Suppurative Disease of the Female Pelvis (Pean-Second Operation.)

PEAN's suggestion of treating suppurative pelvic disease by vaginal extirpation of the womb and its appendages came like a shock to those surgeons, who supported abdominal section and ovarian ablation till he put his theory into proof by on 12th December 1886, performing this operation in a case of endometritis, complicated with salpingitis, pelvic peritonitis and suppurating cysts of the ovaries, together with a large inflamed and painful uterus implicated in the surrounding exudations; but no one cared to follow suit till SECOND successfully performed a similar operation and became enthusiastic over the results obtained. Later on PEAN reported 150 operations with only 0.75 per cent. of mortality; SECOND 103 cases with 10 per cent. deaths; JACOBS 140 cases with a 1.42 per cent. mortality; and DOZEN and LANDAU 77 and 88 operations, respectively, with no deaths. The favorable results obtained justify the contention that by the vaginal method the work of removal is rendered much easier and less dangerous, and a large opening is left which when packed with gauze, makes the best possible drain. The after treatment is far less troublesome than that needed after abdominal section, the surgical shock infinitely less, and recovery quicker, the patient being allowed to sit up in 8 to 10 days, and there being very little trouble in changing the dressing. After the first dressing is removed, the vagina should be irrigated once or twice daily with warm water, and the bowels moved on the third or fourth day.

Some Symptoms which simulate Disease of the Pelvic Organs in Women.

IMPROPER feeding, want of methodical exercise and irregular bathing, according to A. RABAGLIATI, M.A., F.R.C.S., often give rise to the tired, listless fatigued feeling, the headaches and pains in the iliac, lumbar, and ilio-inguinal regions—aching through to the back—that many women complain of the gait appearing to lessen while in a lying position are aggravated by sitting down or moving about, and are much worse during and after the menstrual period. Leucorrhæa, myalgia, ovarian neuralgia, perimyositis, rheumatica perimetritis, B. periostritis, elphoritis and other ovarian and uterine complications accompany these symptoms of apparent disease of the pelvic organs has led to extirpation to the whole of them or some parts of them, or to the employment of pessaries with little or no permanent relief. DR. RABAGLIATI thinks that instead of rushing into operation it is wisest—except of course for salpingitis, cancer, &c.,—to try what can

be done by a liberal diet and proper bathing, followed by the methodical exercises of auto-plesto-myo-kinetics which are calculated to induce a return to health by putting into action the often diseased and pained muscles.

Treatment of Distention of the Fallopian Tubes without Laparotomy and Removal.

WHILE most other surgeons argue in favor of operative interference, DR. F. A. GLASGOW contends that tubal distention is best cured by intra-uterine treatment, and submits that he has cured some twenty cases by the following methods: (1) By gradually packing with gauze without anesthesia. (2) Rapid dilatation of the cervix and packing with gauze after curetting. (3) Dilating by means of antiseptic sterilized elm-bark tents, made of strips of elm-bark just long enough to completely fill the cervix without pressing on the fundus. These tents are kept in an alcoholic solution (1 to 4000) of bichloride of mercury till required for use, when they may be dipped into glycerine or water just before introduction.

—:O:—

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Nerve Supply of the Ovary.

DEVORA, in order to ascertain the distribution of the nerve fibres up to their ends in the ovary, used GOLGI's staining method and furnishes the results of his study in the proceedings of the Academy of Medicine of Belgium. He made use of several different animals—the dog, cat, rat, mouse, guinea pig, turtle and calf. He describes a network of nerves, which accompany the arteries, arterioles, veins and venules; but found no vasomotor system along the capillaries nor, in general, at points where there is no unstriated muscular fibre; neither did he find any ganglion cells. Besides the network just mentioned, there exists in the ovarian stroma, and especially in the cortical zone, a plexus very rich in trunks and fibres interlacing in every direction. This plexus penetrates into the albuginea and some parts reach the base of the germinal epithelium, outlining the young follicles and forming a compact network around the adult follicles. The author found fibrillæ even in the granular layer, where they terminate in cylindrical swellings, but he was not able to prove these to be end-organs.—*N. Y. Med. Jour.*

Influence of Fasting on Muscular Force.

AN Italian physician, SIGNOR MANEA, has recently investigated the influence of fasting for periods of twenty-four and of thirty-six hours on his muscular power, testing this both by voluntary efforts of, and by the application of an electrical current, to, the muscles of his forearm. The conclusion at which he has arrived is that fasting within the above limits has no influence on the muscular power. The deviations after longer periods observed by other investigators he thinks are attributable to the effects of the fasting on the nervous system, circulation, and respiration. SIGNOR MANEA distinguishes two stages in fasting: one in which a kind of compensation of the injurious effects of fasting is effected through the agency of the nervous system, and a second in which there is deranged compensation, with disturbances of the several organs strongly marked, accompanied by loss of weight and abundant excretion of nitrogen in the urine, after which death occurs. The great powers of resistance possessed by the muscles in regard to their force are, he thinks, due to the glycogen and sugar in the blood, which do not materially alter in quantity even after prolonged abstinence.—*Lancet.*

The Kidneys in Pneumonia.

In 150 cases of pneumonia, with 45 deaths, REICHER examined the kidneys in 40 cases, 24 men and 6 women. In these cases no microscopical changes were evident. Microscopically, however, typical changes could be demonstrated. The changes were embraced under the following heads: (1) The changes involved only the cortex. (2) The changes implicated the secretory parenchyma, leaving the interstitial tissue intact. (3) Exudates were found in the capsules of the glomeruli. In 5 cases, the changes were caryolitic and necrotic, whereas, in the remaining cases, the changes implicated the protoplasm of the cells, which were swollen and broken down. These changes were not of an inflammatory but of a degenerative nature. They can be referred, as in cholera, typhoid fever, etc., to toxic, i.e., bacteriæ products. The so-called febrile albuminuria in pneumonia is the clinical symptom of these degenerative renal changes, although this symptom may be absent notwithstanding the changes. In the renal parenchyma, pneumococci were demonstrable and accepted as the factors of the degeneration. The pneumococci could be cultivated on agar, and the cultures infected animals. The writer concludes that the presence of albumin, and even casts in the urine of pneumonic patients, is not a signum mali ominis, inasmuch as it is dependent on a degenerative process capable of reparation.—*American Practitioner*.

Transmissibility of Cylindrical Epithelioma.

H. MORAU'S experiments on white mice established the fact that tumours of the above kind can be engrafted on animals of the same species. That heredity plays an important part in the development of cylindrical epithelioma while pregnancy hastens their evolution. In the absence of ulcers they contain no bacteria, but when they do ulcerate, all the micro-organisms of suppuration are present. They may become generalised, and this generalisation is accelerated by injury of any kind; but in proportion as they develop in new organisms they lose virulence and inoculability.

Absorption of Bacteria into Recent Wounds.

SCHIMMELBUSCH finds that no matter how powerful the disinfectant, neither good nor even favorable results can be obtained by disinfecting wounds infected by disease germs, as the micro-organisms pass too rapidly from the wound into the body juices. NIESSEN showed that anthrax spores were demonstrable in the lymph glands in from 30 minutes to 3 hours after infection of a distant part, while five minutes after inoculation sufficed to distribute saprophytes over the entire organism, and fatty emboli containing cinnabar takes scarcely five minutes to reach the heart from the marrow of the bones. PRUNT, who confirms the above statements, adds that resorption is naturally varied, according to the quality of the germs which act as excitants of sepsis; but says that when germs were scattered over wounds that were 24 to 48 hours old, the animal in many cases escaped infection. SCHIMMELBUSCH maintains that poisonous material is not readily absorbed from the superficies or from fascia, as also with burns, old wounds, and cankered sores, in all of which the receptivity disappears probably in consequence of coagulation products, which afford protection. As regards cauterisation, he found that while hot air at 140°C (284°F.) had no effect in two hours. A one-per-cent solution of corrosive sublimate produced perfect disinfection in one second.

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The Disposal of Garbage in New York.

THE following resolutions, adopted by the Section in Public Health, Legal Medicine, and Medical and Vital Statistics of the New York Academy of Medicine, were approved by the academy on January 3rd.

Whereas, In many cities garbage is disposed of by garbage furnaces within the city limits, without odor, smoke, or nuisance of any kind whatever, as well as at a profit; and,

Whereas, In New York the disposal of garbage by sewers entails a complete loss of \$175,000 per annum, and causes an intolerable nuisance to the dwellers on the neighbouring coast, because of garbage, ashes, and carrion floating ashore, which substances may, by means of garbage furnaces, be transmitted into steam power that would have a value of \$160,000 a year; therefore be it

Resolved, That the present cumbersome, expensive, and insalutary system of collecting, transporting, and disposing of the household garbage of New York should be abolished.

Resolved, That the city be divided into districts, and that the privilege of collecting and disposing of garbage be sold to contractors, held under bonds for the faithful performance of their duty.

Resolved, That it be recommended that coal ashes be collected and stored by householders without swill admixture, as is at present required by law.

Resolved, That odorless garbage furnaces be constructed in each district, as in other cities, and that all garbage be disposed of immediately by incineration therein, while the ashes and junk be disposed of by the contractor as a source of profit.

Resolved, That, inasmuch as at the present time the sanitation of households in New York is under the supervision of the board of health, it be recommended that the collection and disposition of the household garbage be committed to that department and divorced altogether from that of street-cleaning.

Resolved, That this reform is recommended in the interest of public economy, as the present system in vogue is uneconomical and expensive; besides, by establishing modern scientific discoveries and principles, what is now a matter of great expense may be made a source of revenue to the city.—*N. Y. Med. Jour.*

The Sterilisation of Drinking Water.

A VERY simple and efficient method of sterilisation of water is highly recommended by M. MEILLER, Chemist-in-Chief of the Academy of Medicine. Four drops of the tincture of iodine of the French Codex sterilises in a few minutes one litre of spring water, all pathogenic micro-organisms being destroyed. For ordinary household use M. MEILLER states that the best method of sterilising water is to prepare with it an infusion of tea, limes, or hops; but the iodine method may, he says, be advantageously employed by travellers.

How to Get Warm.

It may not be generally known that when exposed to severe cold, a feeling of warmth is readily created by repeatedly filling the lungs to their utmost extent in the following manner: Throw the shoulders well back and hold the head well up; inflate the lungs slowly, the air entering entirely through the nose. When the lungs are completely filled, hold the breath for ten seconds or longer, and then expel it quickly through the mouth. After repeating the exercise while one is chilly, a feeling of warmth will be felt over the entire body, even in the feet and hands.

How to Cook Corn Meal.

Take of good, best corn meal, one quart, fresh and rather dry. Boil in water. If salt is desired, add a very little. When the corn meal is cooked, add a very little of the corn meal, heap up in a dripping pan which has been previously oiled and baked, and bake brown in a hot oven.

Corn Meal and Fig Pudding.

Beat together a scant cup of best sifted corn meal with a cupful of molasses, and stir the mixture gradually into a quart of boiling milk. Cook ten or twelve minutes, or until well thickened, then set aside to cool. Add a cupful of finely chopped figs, one and two thirds cups of cold milk, part cream if it can be afforded, and when the mixture is cool, add two well-beaten eggs. Pour into a pudding dish and bake in a moderate, steady oven for three or more hours; the longer the better. When the pudding has baked an hour, pour over it a cupful of cold milk. Do not stir the pudding but allow the milk to soak in gradually. A pint of finely sliced or chopped sweet apples may be used in place of figs for variety, or if preferred, both may be omitted.

The Physical Signs of Virginity.

"A VIRGIN" so says the dictionary "is a woman who has had no carnal knowledge of a man," and tradition hath it that while the presence of the hymen is the sign of virginity and the test of the virtue of an unmarried woman, its laceration or absence is the proof of her deforation, but there are numberless instances where sexual intercourse has been completed and conception taken place without rupture of the hymen, and others whose chastity is beyond question are either devoid of hymen altogether or have one whose orifice is exceedingly large. Though in the majority of instances it is possible to detect a virgin by vaginal examination, still the proportion of virgins is very small in whom the hymen is so well formed and its orifice so small as to warrant a dogmatic statement of virginity, and we quite agree with our contemporary the *British Medical Journal* in his assertion. "There is then no one physical sign from which a medical man can assert of any woman that she is *virgo intacta*, an untouched virgin," and unjust though in some cases it may be to side with her in a prosecution for rape we are constrained to accept the woman's statement that she has been actually ravished in that instance if other circumstances point to her truthfulness and chastity.

Definition of Insanity.

EGGIS in his new manual on "Mental Medicine," translated by H. M. BAXTER, and issued by the American Journal of Insanity press, while referring with feeling to the definition of insanity of *ESQUIRAL*, demonstrates some of its unreliable features, and gives the following as his own: "Insanity is a special disease and form of alienation characterized by the accidental, unconscious and more or less permanent disturbances of the reason."

THERAPEUTICS AND PHARMACOLOGY.

Potassium Nitrate in the Treatment of Phlegmasia Alba Dolens.

DR. C. H. HOFFMAN reports three interesting cases:—The first a primipara, 28, whose perineum and perineum were extensively lacerated during instrumental delivery, complained on the 15th day of pain and heaviness in left leg which, three days later developed well marked phlegmasia. Temperature rose to 102°F., pulse 120, and respirations 20, and there seemed great danger of gangrene or rupture; the leg being so painful and swollen. The leg being placed at a very obtuse angle on

a feather pillow after being wrapped in cotton, she was given 5 grains of nitrate of potassium every hour. The temperature fell to 98°, the pulse to 80, and respirations 18, and the swelling was reduced to less than one-half in 20 hours. Two days later the limb was well. The second case, a multipara aged 32, exhibited somewhat similar symptoms, but rather more aggravated with good deal of abdominal tenderness and tympany, so she was given 5 grains of nitrate every half hour for eight hours, after which the dose was reduced to 5 grains every hour. In 24 hours the swelling and pain had disappeared; but careless movement by her attendants brought on a relapse which was again controlled by the nitrate, and she made a rapid recovery. The third case, a multipara aged 30, had a normal labor, but on the third day she had an abundant flow of milk, which was checked by massage and laxatives, and on the sixth day phlegmasia developed in the right leg. Here again the nitrate and the wrapping and placing of the limb at an obtuse angle on a feather pillow for 18 hours rapidly reduced the swelling and the temperature—the latter falling to 97.8°F.

The treatment of Tuberculosis with yeast Nuclein.

THE conclusions drawn by DR. VICTOR C. VAUGHAN, M.D., F.R.C., Professor of Hygiene in the University of Michigan after an extended trial of yeast-nuclein in the treatment of pulmonary tuberculosis are:—

1. That in cases where cavities have begun to form in the lungs, nucleic acid from yeast will not produce a cure.
2. So long as secondary infection with pyogenic germs has not occurred, although the tuberculosis may be of long standing and the extent of tissue involved may be great, the remedy if used properly, will retard (not cure or arrest) the progress of the disease.
3. In initial cases, where there is no secondary infection, and when the area involved is small and the patient has some amount of resistance, the proper employment of the remedy may produce at least a temporary cure.
4. In a few cases of urinary tuberculosis the results have been remarkably satisfactory.

He further remarks that it is highly essential to the successful treating of the disease that it should be detected as early as possible. Also that nucleic acid, if used to excess, will certainly do harm. It acts "by stimulating the organs that elaborate the polynuclear corpuscles and these may be over-stimulated. Nucleic acid fails to be of service unless these cell-forming organs respond. They may fail to respond on account of lowered vitality, or they may be paralyzed, as it were, by an excessive dose of stimulant."

Treatment of Nocturnal Enuresis.

DR. D. MACALISTER having first examined the patient to see that no surgical aid is required, gives atropine and strychnine in doses gradually increased. Saccharin, instilled into the eyes, may be used to counteract the action of atropine on the iris. The patient is awakened in the middle of the night, and at early morning, for the purpose of emptying the bladder. The medicine is administered at 9 P. M., and no liquids are allowed after 6 P. M. The secret of success in this method of treatment lies in giving the drugs, especially the atropine, to the full limit of tolerance.—*The Practitioner*.

Acute Dysentery.

HYPODERMATIC injection of morphia, 1 or 2 grains (0.02 or 0.016 grammes). Ipecacuanha, 30 grains (2 grammes) of the powder, made into four large pills with 15 to 20 minims (1 to 1.32 grammes) of dilute sulphuric acid. Held in butter so that pills slip down easily and patient does not even taste them. Large doses (30 to 40 grains—2 to 2.60 grammes) of drug must be used, repeated according to effect on patient.—*Universal Med. Jour.*

Correspondence.

AN APPEAL TO INDIA FOR EPSOM COLLEGE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Within the last decade the growth of Epsom College as a public school has exceeded the most sanguine expectations of its friends.

It occupies a firm and growing position in public favor, whilst the successes of its pupils at the universities and colleges have so filled up the school that the accommodation is no longer sufficient to meet the demand for admission.

This onward progress, however, is threatened with interruption from want of funds. We, who with our colleagues of the governing body, take a deep interest in the welfare of this much needed school, would earnestly appeal to every member of the profession to contribute to the support of an institution which does so much for medical men; for without such aid it becomes only too probable that it will be prevented from attaining the high position at which it justly aims, and to which it is certainly now tending.

(Of the £6,000 annual outlay for the pensioners and foundation scholars, it is to be noted that at present barely one-third is contributed by the medical profession. We cannot help thinking that this has only to be made known to be remedied.)

We wish to point out that no school of its size offers such remarkable advantages to those who intend to enter the learned professions, especially that of medicine, or who may desire to follow scientific pursuits. Numbers are applying for admission, but the school is now full. Great benefit to the foundationers as well as to the other boys would result from extension of the school buildings, but this is impossible without a further increase of pecuniary support.

It must be remembered that there is but very little to depend upon in the way of dividends. To enable the governing body to carry on the school, which is now so thoroughly established on a sound educational basis, the substantial aid of those most interested in it is required. We feel therefore that contributions however small—and we appeal to every medical man in the United Kingdom and India—would strengthen the position and prove that not only is the school a subject of interest, but that confidence is reposed in the endeavour of the governing body to benefit the members of the medical profession.

Subscriptions may be paid to the Treasurer, DR. HOLMAN, 26 Gloucester Place, Portman Square, London, W., or the Secretary at the office, 37 Soho Square, London, W.

Yours &c., J. FAYRE, M.D., K.C.S.I., *Chairman of Council.*

A. HOLMAN, M.D., *Treasurer.*

CHOLERA AND ITS TREATMENT.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—During the recent epidemic of cholera in Ahmedabad, I had a total mortality of only 21 out of 100 patients, but it is probable that the mortality would have been smaller still had the patients strictly followed the directions for treatment, as of two cases in this city and five in Poona,

who were similarly treated, all recovered. I used the following powders and mixture:—

R. Bismuthi subnitratæ grs. xxx, amoniacæ carbonatis grs. ix, sodæ bicarbonatis ℥. Div. pulvis i℥. One every hour, in half a wineglassful of water.

R. Potassæ chloratis ℥i, spiritus ammoniæ aromatici ℥iiss, liquor sodæ chloratis ℥i, tincturæ cinchonæ comp. ℥i, spiritus chloroformi ℥i, tincturæ zingiberis ℥i, aqua menthae piperitæ ad. ℥iij. Fiat Mist. ℥i every hour, and alternated the mixture and powder every hour in every cholera case. Though I do not claim any specific action for these remedies, still they proved wonderfully successful in my cholera cases, as the powder checked the vomiting which recurred on taking the mixture, which relieved tympanitis and controlled the purging. These medicines were persevered in till recovery took place. As adjuncts were given brandy, ice and soda and congee; but opiates and solid food were strongly interdicted, while water was restricted to very small quantities at a time.

Yours, &c., J. B. BAMNOLKAR, C. M. S.,

Medical Practitioner.

THE I. M. A. MEMORIALS ON CIVIL ASSISTANT SURGEONS AND HOSPITAL ASSISTANTS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Please convey my heart-felt thanks to the President and Council of the Indian Medical Association, for having, so soon after the organisation of the Association, taken up the cause of the ill-paid Civil Hospital Assistants throughout the Empire, and submitted a memorial to the Surgeon-General with the Government of India, fully representing their grievances and suggesting needful reforms. I earnestly hope that the Council will continue to evince the same kind of interest on our behalf.

Yours, &c., P. S. J., *Hospital Assistant.*

KULITALAI, 13th February 1895.

II

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—It gave me much pleasure to read the representations on the grievances of Civil Assistant Surgeons made by the Indian Medical Association to the Surgeon-General to the Government of India, published in the last issue of the *Record*. A more concise, definitely to the point and properly couched representation, could certainly not have been made. I know not in what terms to express our feelings of gratitude, and in what terms to offer our sincerest and best thanks to you, who, as Editor of the *Indian Medical Record*, did from the very beginning open up your columns for ventilating the subject, and who, as Secretary to the said Association, has taken so much trouble in bringing it to so promising an issue.

Would that a time may not be far off when we, the brother Assistant Surgeons of all the three presidencies, might join in expressing our feelings of gratitude to the founder of and Secretary to the much-needed medical Association in India in a more substantial way.

Yours, &c. PURNA CHANDRA DASH GUPTA, L. M. S.,

Assistant Surgeon.

KISHORGURGE, 5th February 1895.

(We have received numerous letters of thanks from Assistant Surgeons and Hospital Assistants throughout India and Burma, but we will without publishing any others, lay them before the Council.—ED., I. M. A.)

THE INDIAN MEDICAL RECORD.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

Sir,—I am very glad to see that the Indian Medical Record has taken up the cause of Civil Assistant Surgeons and Civil Hospital Assistants. I should be glad if you could take up the cause of the Military Hospital Assistants as well, whose no answer has been received to the petition submitted by this class a few years ago. Can you enlighten us as to when the seconding of those in civil employ is to take place; as also when the increase in pay of the military hospital attendants of the Indian Army Hospital Corps is to be awarded, and which they have been patiently and anxiously looking forward for.

Yours, &c., MILITARY HOSPITAL ASSISTANT.

THE BOMBAY MEDICAL COLLEGE PRIZES FOR MILITARY STUDENTS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

Sir,—I beg to correct the 3rd paragraph in the article headed "the Bombay Medical College and Prizes for Military Pupils" by "Æsculapius Junior" in your issue of the 15th instant.

I was fortunate enough to carry off a prize of books presented for clinical and minor surgery by Dr. MASINA, the tutor in surgery, who gives such a prize each year.

I dare say Dr. HATCH will give his pocket case for clinical surgery this year, and trust one of the junior military pupils will be the lucky recipient.

If the other professors gave a prize each in their special subjects, it would be an encouragement indeed, especially if the competition was open to all students.

I must also state that there are medals and good conduct prizes for the first three out of the four years of our college career.

Yours, &c., JOHN VINCENT JAMES, D. G. M. C.
Assistant Surgeon, I. M. S.

STATION HOSPITAL,
BARRACKPORE, 25th February 1895.

W. M. O'S. PROVIDENT FUND.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

Sir,—In reply to "P. F." allow me as a well-wisher of the Fund (a subscriber since 1893 and up to date) to write a few words on the subject.

Of late there have been many suggestions as to what should be done to keep the Fund alive—it is alive I believe, for the simple reason that the Bank receives our deposits for the Fund without objection.

Surgeon-Captain WADDE will in time make public the position of the Fund, and until he requests members to select another Secretary, I think there is no need of suggestions as to appoint a new Secretary, especially from members who have lost all claim in the management of the Fund, for some of the would-be reformers have failed to remit their subscriptions for some time past.

In 1894 I made two proposals to Surgeon-Captain WADDE.

1. To reduce the subscription to 2 per cent.

2. To allow members who did not join the Fund when they had an opportunity of doing so, to pay the entrance fee of Rs. 10 and 12 months' back subscription. I now put forward these two proposals again for consideration.

In conclusion, with all due regard to "P. F.'s" criticisms, in the event of Surgeon-Captain WADDE resigning the Secretaryship, I would beg to suggest that Surgeon-Captain HODGKINS be requested to kindly undertake the office.

Yours, &c., GEORGE DEAN CROFT,
Assistant Surgeon.

A PRESCRIPTION FOR DYSENTERY.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

Sir,—The following prescription has been used in the Mandoli Regimental Hospital at Bhurtpore by Surgeon R. K. TANDAN, M.B., C.M., Edin, Chief Medical Officer, for a considerable time, in many cases of acute dysentery, and I have never seen it fail:—Quinine Sulph. grs. ii, Pink Ipecac Rad. grs. v, Ammon Chlorid. grs. x, Tincture Opilii ℥i, xii, Aque ℥i to be given every four hours.

Yours, &c., SURM DEO DAS VERMA, C.M.S.,
Mandoli Regiment, Bhurtpore.
BHURTPORE: 6th November 1894.

REVIEWS.

THE ASEPTIC TREATMENT OF WOUNDS. By Dr. Schlimmelschuss, Privat docent and Assistant Surgeon in Professor VON BERGMANN'S University Clinic at Berlin. Translated from the 2nd German Edition by ALFRED THEODORE RAKE, M.B., B.S. (Lond.) F.R.C.S. (Eng.). Registrar and Pathologist to the East London Hospital for Children. Formerly Surgical-Registrar to Guy's Hospital. (Published by H. K. Lewis, 186, Gower Street, London, W.C. 1894. Price 5s.)

The contents of the 250 pages of letter-press contained in the work under review are a résumé of the lectures and demonstrations given by Professor VON BERGMANN'S able Assistant, Dr. SCHLIMMELBUSCH during the 40th International Medical Congress, held at Berlin, also scattered articles published in Proceedings and Transactions by Professor VON BERGMANN and his former and present assistants.

This is an age when *cunctæ credendi* prevails to a prodigious extent, and of making many books "there is no end," SOLOMON wisely observed.

"When shall we hear the last of germs and antiseptics?" "Still another book?" are questions that no doubt greet every new work dealing on these subjects that comes the light of day. Dr. SCHLIMMELBUSCH'S late *Addendum* is yet another quota to the immense mass of literature that has already been written and published on bacteriology and antiseptic surgery. These subjects, though old and threadbare, are yet ever new and open up fresh fields for research and experiment to those who care to unravel their secrets.

There is nothing old or "stale" in the work before us. Every chapter is thoroughly written and bears the imprint of originality. Professor VON BERGMANN'S name in connection with any work or undertaking is in itself a sufficient guarantee that the said work is really genuine and sure to be instructive. Such is the case with the monograph on the aseptic treatment of wounds, so ably written by his clever collaborator, Dr. C. SCHLIMMELBUSCH.

The work treats, among others, of such subjects as infection, disinfection, sterilisation, and aseptic principles, as applied to drainage of wounds, sponges, hypodermic syringes, catheters, and fluids for washing and irrigation (by sterilisation). These subjects are all discussed in a masterly way, and convey an immense amount of knowledge, the result of original research and laborious study. The book is a monument to one of the highest and latest advancements in science, and is admirably adapted to the requirements of the most punctilious and exacting bacteriologist, at the same time serving as a guide and a text-book to interpret and make familiar the details of Professor VON BERGMANN'S clinic. The profession are the richer for the acquisition of such a work, and owe a debt of gratitude to Professor VON BERGMANN and his illustrious ally, Dr. C. SCHIMMELBUNCH.

THE ANATOMY OF THE NASAL CAVITY AND ITS ACCESSORY SINUSES; AN ATLAS FOR PRACTITIONERS AND STUDENTS. By Dr. A. Ouedi, Lecturer on Rhinology in the University of Budapest. Translated from the second edition by Dr. CLARK THOMPSON, M.D. Lond., F.R.C.S. Eng., M.R.C.P. (Published by H. K. LEWIS, 136, Gower Street, London, W. C. Price 6s.)

This little anatomical atlas of the nasal cavity and its accessory sinuses is a real boon, not only to practitioners and students, but even to specialists. That it has been appreciated by the profession is evidenced by the fact that it is already in its second edition (having been published only a year ago), and has passed through two Hungarian editions also. Further it has appeared in German, and has been translated into Italian and English. Reviewing the work, we may say *ab ovo*, that it is *excellent* in every detail. The plates, 16 in number, have been faithfully reproduced from nature, by being at first carefully photographed and then engraved from the photo-print, consequently each figure is perfectly true to nature, "and is not produced by combining in one picture, the results of several dissections."

Each engraving is prefaced by an explanatory introduction (considerably enlarged in the present edition) arranged topographically, the various parts emphasized, being lettered and noted in *seriatim*.

These illustrations are engraved on good toned paper and are as *beautiful* as they are accurate. They are so distinct in every *minutiae* of detail, that at a glance one can observe and study the relations and mutual connections of every part with neighbouring organs (e.g., ear and eye, &c.) The thanks and congratulations of the profession are due to Dr. A. Ouedi for the production of such a useful and excellent *opusculum*.

LABORATORY GUIDE FOR THE BACTERIOLOGIST. By Langdon Frothingham, M.D., Assistant in Bacteriology and Veterinary Science, Sheffield Scientific School, Yale University. Illustrated. (Published by W. B. SAUNDERS, 525, Walnut Street, Philadelphia 1895.) Price 75 cents.

The above is a neat, concise *brochure* for use in the bacteriological laboratory. The various items noted, are arranged in topographical order, so as to catch the eye and mind; thereby obviating loss of time and temper by sending the bacteriologist to refer to them with ease and pleasure, doing away with having to search for these methods of manipulating microscopical tissues &c., in larger works on the subject. The little treatise before us forms a capital practical guide to bacteriology. It is divided into 4 parts, viz. (1) Bacteriological technique, (2) Staining methods, of which some 16 are mentioned, (3) Preparations of nutrient media, and (4) Imbedding tissues for cutting sections. There are also noted "a few ways by which the work may be much accelerated—ways known to and practised by many, but not perhaps, all."

Two excellent tinted plates are added, illustrative of various bacilli. Dr. Frothingham's little work will no doubt be welcomed by all workers in bacteriological laboratories, serving as it does, a most useful and practical purpose.

Government Medical Service.

GOVERNMENT OF INDIA.

The tenure of the appt. of Surgn. Maj. Genl. A. F. Blandshaw, C.B., A.M.S., as Principal Med. Offr., Her Majesty's Forces in India, is extended to the 31st March.

Surgn. Lieut.-Col. F. W. Wright, D.S.O., M.B., 8th Regt. of Beng. (Light) Infy., leave (p. a.) for two years.

Surgn. Lieut.-Col. E. Palmer, 8th Beng. Lancers, leave for seven months.

Surgn.-Capt. W. H. W. Elliot, 4th Punjab Infy., extension of leave (p. a.) for four months.

Surgn. Lieut.-Col. Frederic Augustus Smyth, to be Brig.

Surgn. Lieut.-Col., vice Brig.-Surgn. Lieut.-Col. W. B. Hooper, retired, 13th Jan'y.

Surgn.-Maj. P. deH. Haig, 1st (Prince Albert Victor's Own) Regt. of Punjab Cavalry, leave (p. a.) for one year.

BENGAL GOVERNMENT.

Dr. J. L. Hendley, Civil Med. Offr. of Jalpaiguri, (leave for one month).

Surgn.-Capt. A. W. T. Bulst-Sparks to act. as Civil Surgn. of Jalpaiguri, vice Dr. J. L. Hendley.

Asst. Surgn. Hari Charan Sen did superny. duty at the Med. Coll. Hosp., Calcutta, from the 24th Jan'y. to the 31st Feby.

Asst. Surgn. Nidhu Lal Hakkar to have tempy. med. charge of the sub-divn. and Disp'y. at Satkhira, vice Asst. Surgn. Akahoy Kumar Nandi.

Asst. Surgn. Gopal Chunder Mukerjee to do the duties of Mil'y. Asst. Surgn. E. A. DuBois in the Presly. Genl. Hosp. Asst. Surgn. Akahoy Kumar Nandi, of the Satkhira sub-divn. and disp'y. leave for one month.

Asst. Surgn. Omes Chandra Banerjee, leave for three months.

Asst. Surgn. Monindra Lal Mitter, House Physician, 2nd Physician's Ward, Med. Coll. Hosp., to do superny. duty in that institution until further orders.

Asst. Surgn. Jogheswar Mukerjee, an additional Asst. Surgn. in the Chemical Examiner's Dept., is apptd. a House Physician in the 2nd Physician's Ward, Med. Coll. Hosp., vice Asst. Surgn. Monindra Lal Mitter.

Asst. Surgn. Benode Behary Ghosal to do superny. duty in the Med. Coll. Hosp., Calcutta, 13th Feby.

Asst. Surgn. Barola Kanta Roy to do superny. duty in the Med. Coll. Hosp., Calcutta, 15th Feby.

Asst. Surgn. Lolit Mohan Laha to do superny. duty in the Med. Coll. Hosp., Calcutta, 13th Feby.

Asst. Surgn. Bully Chunder Sen, Teacher of Medicine, Campbell Med. School, leave for forty-five days.

Asst. Surgn. Dinno Nath Mitter, first Demonstrator of Anatomy in the Campbell Med. School, to act as teacher of Medicine in that institution in addition to his own duties, vice Asst. Surgn. Bully Chunder Sen.

Asst. Surgn. Kalar Nath Malak to do superny. duty in the Med. Coll. Hosp., Calcutta, 17th Feby.

Asst. Surgn. Jogendra Nath Bose, a Resid. Asst. Surgn. in the Campbell Med. School and Hosp., to act as teacher of Surgery in that institution, vice Asst. Surgn. Zuhiruddin Ahmed.

Asst. Surgn. Zuhiruddin Ahmed, Teacher of Surgery in the Campbell Med. School, leave for three months.

Asst. Surgn. Ganga Gobinda Sarkara, of the sub-divn. and disp'y. at Nator, leave for three months.

Asst. Surgn. Hem Lal Dutt, a superny. at the Med. Coll. Hosp., to have tempy. med. charge of the sub-divn. and disp'y. at Nator, Rajshahi Dist., vice Asst. Surgn. Ganga Gobinda Sarkara.

Asst. Surgn. Ganes Chandra Mitra, a superny. at the Presly. Genl. Hosp., leave for one month.

Asst. Surgn. Narendra Nath Gupta to do superny. work in the Presly. Genl. Hosp. until further orders.

PUNJAB GOVERNMENT.

Priv. leave granted to Brig.-Surgn. Lieut.-Col. G. Manney, Civil Surgn. of Marree, is extended by five days.

Second class Hosp. Asst. Hadda Ali is reinstated in the service of Govt. from 7th Feby.

Asst. Surgn. Jhang Ram, doing genl. duty at Chudaganj, to Rawalpindi for genl. duty, 27th Jan'y.

Hosp. Asst. Natha Singh was apptd. to the Kanpur District Kanpur Dist., 16th Jan'y., relieving Hosp. Asst. Vishnu Ram.

Surgeon-General Macdonald (from the **India Canal** Disp., **Delhi** Dist., **1st Feby.**).

Asst. Surg. Major Macdonald (from the **Massachusetts** Disp., to the **India Canal** Disp., **6th Feby.**).

Hosp. Asst. Barnam Singh, **Jalapaour** Disp., **1st Feby.**, by **Hosp. Asst. Sachet Singh**, doing genl. duty at **Delhi**.

On being relieved of the charge of the **Khewra** Disp., **Shelton** Dist., **Hosp. Asst. Phile Khan** was transferred to the **Patti** Disp., **Lahore** Dist., **80th Jan.**, relieving **Hosp. Asst. Narasingh Das**.

Hosp. Asst. Muhammad Ishaq resumed charge of the **Sachaura** Disp., **Umballa** Dist., **6th Jan.**, relieving **Hosp. Asst. Guranditta**.

Hosp. Asst. Kirpa Ram, **Thaneswar** Disp., **Umballa** Dist., three months' priv. leave, and was relieved on **13th Jan.** by **Hosp. Asst. Guranditta**, transferred from **Sachaura**.

Hosp. Asst. Khula Bakhsh, doing genl. duty at the **Mayo** Hosp., **Lahore**, one month's leave, **28th Dec.**, **1892**.

Hosp. Asst. Khula Bakhsh to do genl. duty at **Amritsar**, **30th Jan.**

Hosp. Asst. Ganesh Das, doing genl. duty at **Delhi**, to the **Sachaura** Disp., **Umballa** Dist., **28th Jan.**

Hosp. Asst. Ghulam Kadir resumed charge of the **Shorkot** Disp., **Jalapaour** Dist., **1st Feb.**, relieving **Hosp. Asst. Bisanda Ram**.

Hosp. Asst. Narasingh Das, from the **Patti** Disp., **Lahore** Dist., to the **Sinawan** Disp., **Muzaffargarh** Dist., **6th Feby.**, relieving **Hosp. Asst. Lachman Das**.

On being relieved of his duties at the **Kanalla** Disp., **Montgomery** Dist., **Hosp. Asst. Sundar Singh** was transferred to **Muzaffargarh** for genl. duty, **3rd Feby.**

Asst. Surg. Khaleh Chand held charge of the duties of **Supdt.** of the **Gujrat Jail** from the **27th** to the **30th Nov.**

MADRAS GOVERNMENT.

Surgn.-Maj. A. J. O'Hara, priv. leave for two months.

Surgn.-Capt. Frank Charles Pereira, M.B., to act as **Dist. Med. and San. Offr.** and **Supdt.** of **Jail**, **Cuddapah**, during the employment of **Surgn.-Maj. A. J. O'Hara** on other duty.

Colonel Ponappa Gnanapathi Gari, L.M.S., to act as **Civil Surgn.**, **Cannanore**, vice **Surgn.-Maj. S. C. Sarkies** on furlough.

Civil Apoth. Saldapet Chandrasakara Mudali, L.M.S., to act as **Asst.** to **Dist. Med. and San. Offr.**, **Mangalore**, vice **C. P. Gnanapathi Gari**.

Second class Asst. Surgn. M. Bowers to be **1st class Asst. Surgn.** from **10th Feby.**

Surgn. Lieut.-Col. J. A. Laiding, I. M. S., extension of leave (p.a.) for six months.

Brig.-Surgn. Lieut.-Col. J. Smith, I. M. S., **29th Madras Infy.**, leave (m.c.) for three months in extension.

Surgn. Lieut.-Col. H. Allison, M.D., I. M. S., **Profr.** of **Anatomy**, **Med. Coll. Madras**, leave (p.a.) for one year.

Surgn.-Lieuts. Robert Henry Elliot, M.B., B.S. **Lond.**, **R.C.S. Eng.**, **Robert King Mitter**, M.B., and **Wilfred Ernest Arbuthnot Armstrong**, to be **Surgn.-Capt.**, **30th Jan.**

Cent. Asst. Surgn. and **Hon. Surgn.-Capt. J. I. Laffrey**, I. M. S., **Madras**, is permitted to retire from the service, **12th Jan.**

BOMBAY GOVERNMENT.

Surgn.-Capt. J. G. Hojel, I. M. S., extension of leave for three months.

Asst. Surgn. Abdul Ghani Hakim, L.M.S., has been placed on genl. duty from **26th Jan.**

Asst. Surgn. D. C. ... priv. leave for thirty days, **12th Feb.**

Asst. Surgn. S. C. ... M.D., B.S., on relief by **Brig.-Surgn. Lieut.-Col. C. T. Peters**, M.B., to act as **Civil Surgn.**, **Karwar**.

Asst. Surgn. Venkatesh Balwant Karandikar, B.A., L.M.S., to act as **Civil Surgn.**, **Karwar**, until relieved by **Surgn.-Capt. S. R. Prall**.

Sai Rameshbabai, M.B. (Bruc.), L.B.C.P. & S. (Edin.), to act as **House Surgn.**, **Kanva Hosp.**, vice **Miss Frances K. H. Cassin**, M.D.

CENTRAL PROVINCES GOVERNMENT.

Surgn. Lieut.-Col. D. N. Martin resumed charge of the office of **Civil Surgn.**, **Saugor**, from **Surgn.-Capt. R. C. Macdonald**, **6th Feby.**

Asst. Surgn. E. P. Clements assumed charge of the office of **Civil Surgn.**, **Wardha**, **30th Jan.**

Three months' priv. leave is granted to **Hosp. Asst. Ramlogan Singh** of the **Schokra Branch Disp.**, **Jubbulpore** Dist., **7th March**.

Civil Hosp. Asst. Ram Krishna Lal, doing duty under orders of the **Civil Surgn.**, **Jubbulpore**, is temporarily posted to the **Schokra Branch Disp.**, vice **Civil Hosp. Asst. Ramlogan Singh**.

Civil Hosp. Asst. Harji Rao, doing duty under orders of the **Civil Surgn.**, **Saugor**, is appointed to the **Police Hosp.**, **Saugor**.

First Class Civil Hosp. Asst. Jowra Khan Lal, attached to the **Police Hosp.**, **Saugor**, is permitted to retire from the service.

Civil Hosp. Asst. Bhogoo Lal, doing duty under orders of the **Civil Surgn.**, **Jubbulpore**, is temporarily appointed to the **City Branch Disp.**, **Saugor**, vice **Civil Hosp. Asst. Amir Khan**, directed to do duty at the **Garhakota Pals**.

Civil Hosp. Asst. Vilja Shankar, of the **Jail and Police Hosp.**, **Bilaspur**, is granted three months' priv. leave.

On being relieved by **Civil Hosp. Asst. Abdul Karim**, **Civil Hosp. Asst. Ujagar Perahad**, temporarily attached to the **Deoli Branch Disp.**, **Wardha** Dist., is posted to the **Jail and Police Hosp.**, **Bilaspur**, vice **Civil Hosp. Asst. Vilja Shankar**.

Civil Hosp. Asst. Ram Shal to do duty under orders of the **Civil Surgn.**, **Nagpur**.

N.-W. P. AND OUDH GOVERNMENT.

Asst. Surgn. Gopal Chandra Gupta, in charge of the **Sikandrabad Disp.**, **Bulandshahr** Dist., priv. leave for two months **5th Feby.**

Surgn.-Maj. F. C. Chatterjee, **Civil Surgn.**, **Pilibhit**, priv. leave for two months and twenty-eight days, **1st March**.

Surgn.-Capt. O. Macgregor, **Supdt. Central Prison**, **Agra**, furlough for ten months, **3rd March**.

Surgn.-Capt. J. ... on relief by **Surgn.-Maj. F. C. Chatterjee**, attached to the **Allahabad Dist.**

Surgn.-Capt. S. H. Henderson, **superary. Civil Surgn.**, **Fatehpur**, on relief by **Surgn.-Maj. G. A. Emerson**, attached for duty to the **Central Prison**, **Bareilly**.

Hosp. Asst. Jawant Rao, of the **Amrabad Branch Disp.**, **Bulandshahr** Dist., to the **Sikandrabad Disp.**, vice **Asst. Surgn. Gopal Chandra Gupta**, granted priv. leave.

Asst. Surgn. Subhan Ali, **Lecturer**, **Agra Med. School**, to the charge of the **sadar Disp.** at **Banda**.

Surgn.-Maj. J. Anderson, **Civil Surgn.**, **Bareilly**, to hold visiting med. charge of the **Pilibhit Dist.** in addition, vice **Surgn.-Maj. F. C. Chatterjee**.

BURMA GOVERNMENT.

Dr. H. E. Wells, M.B., is temporarily appointed as an **Uncovenanted Med. Offr.**, and is posted to **Burma**.

The services of **Mily. Asst. Surgn. L. J. Bailey** are placed at the disposal of the **Chief Commr.** of **Burma**.

Dr. F. X. deAttales, **Civil Asst. Surgn.** of the **Imperial List**, having passed the prescribed exam. for advancement, is promoted to the **2nd grade**, **2nd June 1892**.

Hosp. Asst. R. S. Dashmookha left **Ry. Disp.**, **Yamethin**, and assumed charge of the **Civil Disp.**, **Henada**, **31st Jan.**

Second Grade Hosp. Asst. M. N. Jonathan and **Shalk Abdululla** qualified for promotion to the next higher grade on the **29th Oct. 1892**, and are entitled to the pay of the same, with the allowance for English qualification, from **2nd July 1893**.

Third grade Hosp. Asst. T. V. Goriindaraju Mudaller and **C. J. Packiam Pillay** qualified for promotion to the next higher grade on the **29th Oct. 1892**, and are entitled to the pay of the same, with the allowance for English qualification, from **1st July 1893**.

Hosp. Asst. Abdul Wahid left **Police Hosp.**, **Mogaung**, and assumed charge of the **Outpost Hosp.**, **Nanyasin**, **Mogaung sub-div.**, **19th Dec. 1892**.

Hosp. Asst. Khema Ram left **Outpost Hosp.**, **Mohayin**, **Katha Dist.**, and assumed charge of the **Outpost Hosp.**, **Manai**, **Katha Dist.**, **14th Jan.**

Hosp. Asst. K. Perumal Pillay left **Outpost Hosp.**, **Manai**, **Katha Dist.**, and assumed charge of the **Police Hosp.**, **Katha**, **20th Jan.**

Surgn.-Lieut. A. E. Berry, I. M. S., is appointed to be in addition to his med. duties, the **Civil Med. Offr.**, **Falam Chin Hills**, vice **Surgn.-Maj. F. Clements Smith**.

Surgn.-Capt. L. H. Carter made over, and **Surgn.-Capt. J. W. Wolfe**, M.B., assumed charge of the duties of the **Secy.** to the **Impe. Genl.** of **Jail**, with **Civil Med. Administration**, **Burma**, **15th Feb.**

Asst. Surgn. Maung Tsin left **Civil Disp.**, **Bamain**, and assumed charge of the **Civil Disp.**, **Attahmyo**, **Thayemyo** Dist., **5th Feb.**

O. C. C.

Surg. Major Alexander Stephen MacGregor, I. M. S. (Surg.) who is leaving on 15th Jan. 1895.

The Surgeon of Hosp. Asst. Nur. Haid, S. M. D. are disappointed with on account of physical weakness for military service.

Surg. Lieut. W. Selby, to the off. med. charge of the 20th Punjab Regt., vice Surg. Capt. D. T. Lane.

Surg. Lieut. G. M. C. Smith, from the off. med. charge of the 10th Bengal Lancers, to the 51st Punjab Inf., vice Surg. Capt. J. G. Jordan.

Surg. Asst. Kanhaiya Lal to the 2nd grade Hosp. Asst. from the 1st Oct. 1894.

Surg. Capt. W. B. Botes, A. M. S., leave (v.p.a.) for six months.

Surg. Asst. A. A. C. Rafter, I. M. S., passed the higher standard in Hindustani, 7th Jan.

Surg. Lieut. J. D. Alexander, A. M. S., passed the lower standard in Hindustani, 7th Jan.

Surg. Maj. P. A. Weir, I. M. S., and Surg. Capt. H. G. Hathaway, A. M. S., passed the lower standard in Pushtu, 2nd Jan.

ASSAM GOVERNMENT.

Sick leave for three months is granted to Hosp. Asst. Lalit Mohan Sen, in med. charge of No. II Divn, Niehuguan-Manipur Road Circle, 20th Dec. 1894.

Hosp. Asst. Karam Ali Haarak, a superny, at Nowgong, is transferred to Shillong, and appld. a superny. under orders of the Civil Surg., 14th Jan.

Hosp. Asst. Raj Mohan Ganguli, in charge of the Sheila Disp., in the Khasi and Jaintia Hills Dist., is, on return from leave, appld. to the charge of the Jowai sub-divn. in that dist., 26th Jan., vice Hosp. Asst. Nil Kanta Sen, appld. a superny. for duty under orders of the Civil Surg., Shillong, 29th Jan.

Hosp. Asst. Sheikh Amir-Uddin Ahmadi, a superny. in the Goalpara Dist., is transferred to the Garo Hills Dist., and appld. a superny. under orders of the Civil Med. Offr. of that dist., 28th Dec. 1894.

Hosp. Asst. Sheikh Amir-Uddin Ahmadi, a superny. in the Garo Hills Dist., is appld. to the charge of the Dalu Disp., in that dist., 6th Jan.

DOMESTIC OCCURRENCES.

BIRTHS.

BATTERSBY.—On 11th Feb., at Rawalpindi, the wife of Surg. Maj. J. C. Battersby, A. M. S., of a daughter.

CHILDS.—On 11th Feb., at Malabar Hill, the wife of Surg. Capt. L. F. Childs, I. M. S., of a son.

MARRIAGE.

WADDELL-BREWER.—On 10th Jan., at St. Anne's, Highgate, Laurence Austine Waddell, Surg. Maj., Beng. Med. Service, to Amy Louise, eldest daughter of Robert Reeves, Esq.

DEATH.

JACKSON.—On 19th Jan., at Nice, Depy-Surg. Genl. C. J. J. Jackson, H. M. Indian Med. Service (retired), aged 61.

NOTICES TO CORRESPONDENTS.

A. L. M. (Jaipur).—Your matter will be laid before the Association at once and forwarded to the Vice-Chancellor of the Calcutta University.

H. K. S. (Raiganj).—Your interesting letter will appear in an early issue.

J. E. W. (Byond).—Kindly give us the names of as many men as you know who have received the license in question from the Surgeon-General, and send in each list with a temperate statement of facts as to your interview with the Surgeon-General, when due notice will be taken of the matter.

F. K. E. (Rawalpindi).—Please apply to the medical schools which educate Hospital Assistants. The members of the Indian Medical Association will supersede all previous acts. Wait patiently for the Government's reply.

J. E. S. (Bathurst).—Surgeon-General, I have a report of the W. M. O. F. and want to know if we receive it, kindly to publish it.

Dr. M. J. McCall (Kangaroo).—In my letter in your journal of 15th October an Military Hospital Surgeon, please correct as follows: "In consideration of this it was an accepted principle by them to undergo an extra two years' study to qualify for the Sub-Adjutant Surgeons grade."

J. F. P. S.—Let us have the games you take exception to. The document in question will soon be issued.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Courier—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medical-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Gazette Tibahat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Scalpel—Indian Journal of Pharmacy.

Gazettes of the Governments of India. N. W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers.—Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita—Basar Patrika.—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine—Medical Missions.

Books.—Report of the Administration of the Gondal State, for the year 1893-94.

Doz-Book and Manual of Prescription-Writing. By E. S. Thornton, M.D., Ph. D. (Publisher: W. B. Saunders, Philadelphia, 1895). Price \$ 1.25 net.

Notes on the Newer Remedies. By David Cerna, M.D., Ph. D. Second Edition. (Publisher: W. B. Saunders, Philadelphia, 1895.) Price \$ 1.25 net.

The Dorothea Bruns Baths. By W. H. Tomlin, M.D. (London), M.R.C.S. (Eng.) (H. K. Lewis, London, 1895.) Price 1s.

Syllabus of Gynecology. By J. W. Long, M.D. W. B. Saunders, Philadelphia, 1895.)

Hand-book of Diseases of the Eye. 3rd Edition. By Henry B. Swaney, M.D., F.R.C.S. (Publisher: H. K. Lewis, London, 1895.) Price 10s. 6d.

Literary Contributions and Letters from: Surg. Maj. H. Peter Dimmock, I. M. S., Bombay; Surg. Capt. P. W. O'Gorman, I. M. S., Mirzapur; Asst. Surgeon, I. M. S., Amritsar; John E. Dorenburg Jones, M.D., M.C. (Abord), Calcutta; Surg. Capt. J. F. Evans, M.D., Calcutta; Asst. Surg. Chund Lal Bose, M.D., F.R.C.S., Calcutta; Asst. Surg. Harry Sidney, M.D., F.R.C.S., Calcutta; Asst. Surg. A. V. M. King, I. M. S., Bombay; Asst. Surg. F. S. Bhatnagar, I. M. S., Ahmedabad; J. Fayrer, M.D., F.R.C.S., London; J. B. Bhatnagar, M.D., F.R.C.S., Calcutta; Datt Gupta, I. M. S., Kishanganj; Asst. Surg. John Vincent James, D.M.S., Ranchipore; Asst. Surg. George Ross Grove, and others.

Original Articles.

THE DANGERS OF AN ACT RESTRICTING THE FREE SALE OF POISONS IN BENGAL.

By GURUN, CAPT. J. F. EVANS, M.R.,

and

ASSISTANT SURGEON CHURN LAL BORA, M.B., F.C.S.

Chemical Examiners to the Government of Bengal.

(Continued from page 180, Vol. VIII.)

VI. ACCIDENTAL POISONING.

The most cursory consideration of any record of cases of accidental poisoning must always produce the conviction that the term is almost a misnomer. It is rare to find an instance of accidental poisoning unassociated either with culpable ignorance or grave neglect. There is an old adage regarding the care of edged tools, and surely such poisons as opium, aconite, nux vomica and arsenic are as dangerous as many edged weapons. Yet, if we are to be guided by our knowledge of actual cases, we must believe that to-day in some humble households in Calcutta a poisonous dose of opium is within the reach of children barely able to walk, a want of parental forethought which is productive of cases of opium poisoning.

Poisons in bunniah's shops.—The shops of the *bunniahs* constitute another danger, for they are the source, whence all classes of the community, both European and native, either directly or indirectly through their servants draw their supplies of spices and condiments.

The *bunniah*, besides selling spices and condiments, is a retail vendor of sago, barley, sugarcandy and indigenous medicines, both mineral and vegetable, together with a few European drugs.

The *barba*, with whom the general community are less concerned, sells fresh vegetable drugs only.

Both *bunniahs* and *badias* are, as a rule, ignorant people, scarcely able to read or write their own language. Their knowledge of the properties or identity of the drugs they sell is very imperfect, and the manner in which the drugs are stored renders their ignorance almost criminal.

In a *bunniah's* shop even the poisonous drugs are generally kept in unlabelled earthen "handles" which may happen to be in close proximity to harmless drugs, spices and condiments.

From memory and practice the *bunniah* is usually able to sell his wares without mistake, but should the position of the pots be changed without his knowledge, most serious accidents may arise. On one occasion a customer was supplied with strong nitric acid in place of spirits of wine, and on another nux vomica bark (*kuashla*) was supplied instead of *weighia antidysenterica* (*kuash*). The latter mistake caused the death of a child.

Mistakes are occasionally made even by competent persons well acquainted with the nature of the drugs they vend. A mixture of iodoquin and strychnia was once supplied at a chemist's shop to a customer in place of iodoquin, and on another occasion the proprietor of a medical hall addicted to the use of opium administered *kuash* by mistake to a patient or administered both a dose of nux vomica

instead of his usual morning dose of opium. In both these instances the mistake was followed by a fatal result.

Quack remedies.—Somewhat similar to the sale of drugs by ignorant *bunniahs* and *badias*, and quite as dangerous is the trade in secret preparations and quack remedies. This class of medicines finds a large and ready market among the poor and ignorant classes of the country, the sale no doubt being assisted by an eloquent, if not truthful, description of their origin and virtues.

Instances are recorded of credulous patients having been induced to believe that medicines brought by them from some of these unscrupulous vendors were obtained as a special favor from the gods. The medicines often contain poisons, and as they are prepared by ignorant persons, the dose is often, if not always, excessive.

Cases of accidental poisoning resulting from the use of quack remedies.—Many instances of poisoning produced by taking quack remedies are on record. Thus in 1880, at Sibesagar, a woman took one of a number of pills sent to her from Calcutta with the recommendation that they were warranted to cure dysmenorrhoea, amenorrhoea, leucorrhoea, menorrhagia and uterine troubles generally. Within half an hour of taking the pill, well marked symptoms of strychnia poisoning were induced. The pill was found to contain strychnia.

In 1882 a sepoy of a native infantry regiment was found to be in possession of some medicinal preparations by means of which, to his own pecuniary benefit, he had been in the habit of supplementing the regular medical treatment of his sick comrades. Some of the men thus treated developed symptoms of irritant poisoning, while others displayed symptoms of mercurial marasmus. On analysis the preparations were found to contain arsenic, antimony and mercury.

During the current year six samples of a stock of medicines which were in considerable request among the poor of Calcutta as cancer cures, etc., were referred to the Chemical Examiner for analysis. Four of them contained arsenic.

Accident from administration of charms and love philters.—Certainly less creditable and possibly more criminal even than the foregoing is the class of cases of so-called accidental poisoning, that we now propose to briefly consider. It arises from the use of charms, love philters and of medicines administered with a view to excite the sexual passions.

Charms and love philters are in common use among the ignorant people of the country, and though for the most part they are harmless preparations of betel and different kinds of root fibre, yet occasionally they are compounded of poisonous drugs such as aconite, arsenic, and datara. As a consequence an undetected and unforeseen fatality occasionally results from their use. Thus in 1884 a man unintentionally poisoned his wife, a young girl only 14 years of age, by giving her a so-called love philter mixed with sugar. The girl disliked her husband, and was in the habit of deserting him. The love philter which contained arsenic was administered by the husband apparently in the honest hope that he might thereby gain his wife's affections.

Allied to the administration of dharms containing arsenic and other drugs is the habitual use of arsenic by certain classes of people in India on account of its supposed aphrodisiac properties.

Introduction of poisonous substances into foodstuffs.—Up to this point we have dealt with accidental poisoning only, in so far as it arises from the use or misuse of poisonous drugs as such; but cases of accidental poisoning also arise from the introduction, for the most part through ignorance, of improper substances into foodstuffs. As an example of this may be cited, the coloring of sweets with poisonous pigments by the ignorant sweetmeat sellers of the country. The pigments discovered to have been used in this way are yellow arsenic, verdigris, SCHEEL'S green, chromate of lead, magenta and other aniline dyes. Cases of this kind are well within the reach of police interference, and it must be said are generally prevented in Calcutta.

Occasionally also a poisonous vegetable substance due to some mistake as to its identity is prepared and eaten as food. The following case occurred in 1893, and is an interesting example of the kind. Some individuals near Dacca made a curry of a tuberous root which they had obtained from a neighbouring jungle and mistaken for "*matia aloo*." After partaking of the curry, "they became intoxicated and vomited, remaining insensible for 6 hours. They then regained their senses." On analysis the tuber and the curry were found to contain a violent irritant and narcotic poison. Neither the tuber nor its active principle have yet been identified.

Cases of this kind are however rare, and present a marked contrast to the majority of instances of so-called accidental poisoning, most of which are at least culpable, if not criminal.

VII. CATTLE POISONING.

A glance at the following table will shew at once the nature of the cattle poisoning which takes place. Its undue prevalence has already been considered.

TABLE IV.

Showing the percentage of Arsenic detection in animal viscera and in substances sent for examination as cattle poisons during ten years ending 1893.

| | 1884 | 1885 | 1886 | 1887 | 1888 |
|--------------------|-------|------|-------|-------|------|
| Animal viscera ... | 100 | 100 | 100 | 100 | 100 |
| Cattle poisons ... | 92.59 | 96.4 | 92.35 | 95.78 | |

| | 1889 | 1890 | 1891 | 1892 | 1893 |
|--------------------|-------|-------|-------|-------|------|
| Animal viscera ... | 100 | 100 | 100 | 100 | 100 |
| Cattle poisons ... | 94.78 | 93.66 | 92.36 | 93.18 | 92.5 |

Poison selected for cattle poisoning.—Practically arsenic is the sole poison employed for the destruction of cattle. It has many advantages over other poisons. It is tasteless, certain in its action, and the dose required is small. Further, the hides of animals poisoned with arsenic are more easily preserved.

The method of administration is as follows:—A small quantity of white arsenic is made into a paste with flour, oil or oil-cake, and then wrapped up in plantain or other leaves and thrown before cattle grazing in a field, or introduced into the manger among the fodder.

The seeds of *Lathyrus teres*, *Lathyrus pratensis*, and yellow cleaster are also used as cattle poisons, though but rarely in Bengal. The seeds of *abrus precatorius* are made into a paste, which is dried and then fashioned into a miniature arrow head about 1 inch long and $\frac{3}{4}$ th of an inch in diameter at the base constituting in this shape the well-known "suil poison." The "suils" thus prepared are forcibly introduced through the skin of the animal to be poisoned. In the Punjab, similar "suils" are prepared with arsenic in place of *abrus precatorius* seeds.

Motive for cattle poisoning.—Though cattle are occasionally poisoned to satisfy a grudge, the more usual object is the possession of the hide. The poisoners are a class of people known as *Chamars*, who in return for their services in skinning cattle are allowed to claim a percentage of the profits derived from the sale of the hides.

The destruction of dumb animals, which at present prevails in India, is not only accompanied with much physical suffering on the part of the animal, but it is also unnecessary. If fresh supplies of poison be cut off, with the gradual exhaustion of the stock of arsenic existing throughout the country, a diminution in this class of crime may confidently be expected. The measures proposed for restricting the supply of arsenic will be dealt with later in detail.

By the consideration of the prevalence and nature of the poisoning in the province of Bengal at the present time, we have shewn the necessity for some measures calculated to bring about a reduction of the present prevalence.

The measure which naturally commends itself, and which has been successful in other countries is that usually described as a restricted and regulated sale of poisons.

Accordingly we now pass to the consideration of the best and most feasible means for restricting and regulating the sale of poisons in Bengal.

C. PROPOSED MEASURES FOR RESTRICTING THE SALE OF POISONS.

As recommendations having the same object in view have frequently been made during the past half century, it would be as well to refer to these first, and then deal with the scheme now proposed.

Accordingly our remarks concerning measures proposed for restricting the sale of poisons are easily arranged into the following three sections:—

1. Previous recommendations and their outcome.
2. Proposition now under discussion.
3. Difficulties attending the introduction and working of such a measure or briefly its *pros and cons*.

1. PREVIOUS RECOMMENDATIONS AND THEIR OUTCOME.

The recommendations.—From the year 1645, when Dr. MOTAT drew the attention of Government to the matter, up to the present time, the recommendations to control the sale of poisons have been numerous and frequent. Some of these will now be reproduced. Thus in 1856 Dr. MOTAT's contention was supported by Dr. CHAVASSA, who then wrote as follows:—

"It certainly appears to be a matter of great importance that the importation or at least the sale of arsenic in India should be regulated by stringent legislative enactment. There is no law in India prohibitory of the sale of poisons."

The experience of medical officers in Madras corroborated that of medical officers in Bengal; for in 1879 the

Surgeon-General and the Chemical Examiner to the Government of Madras submitted the following statement to their Government. The Chemical Examiner in his report states that—

"Arsenic is far more frequently used than any other poison. Attempts at poisoning with other poisons unless accidentally, have probably rarely succeeded. There can be little doubt that in this Presidency, the determined poisoner is pretty sure to make use of some arsenical compound. The destruction of human and animal life by this poison is so considerable that some restriction upon the sale of arsenic is, from the medico-legal point of view, highly desirable."

When forwarding the Chemical Examiner's report, Surgeon-General W. R. CORNISH, F.R.C.S., C.I.E., recorded the following views:—

"In passing on this report to Government, I feel that I should be wanting in my duty, if I did not bring prominently to the notice of Government that the experience of the Chemical Examiner's Department shows most conclusively that the poisons resorted to by the people of India for criminal purposes are mainly common, arsenical preparations or mercurial salts, and that no restriction whatever is placed on the sale of such things in this part of India."

"I have no doubt that if some wholesome restriction was brought to bear on the trade in arsenical and mercurial preparations and in some of the more common organic poisons, the crime of administering poison would be less frequent and more easy of detection than it now is, and I venture to hope that the Government may be prepared to deal with the question, having for its object the restriction of the sale of poison in the Presidency. It is not creditable to our administration in this particular that within the last year, no fewer than three persons in the town of Madras should have been enabled to commit suicide by purchasing at druggists' shops without let or hindrance, quantities of chloral hydrate sufficient to cause death."

The necessity for restricting the indiscriminate and irresponsible sale of poisons, especially arsenic, was frequently dealt with by Dr. WARDEN, the late Chemical Examiner to the Government of Bengal, in his annual reports. The following remarks appeared in the report for 1882 regarding cattle poisoning:—

"Arsenic is the poison generally used. Enormous quantities are found in the parcels of suspected cattle poison sent for examination. In one case one pound of white arsenic was found in two packets. It has been urged that any special legislation to restrict the sale of poisons would be useless, because indigenous vegetable poisons are to be found in every hedge-row. This is a fallacious argument. Because vegetable poisons happen to be common, it does not follow that arsenic is to be picked up in roads and ditches. Arsenic is *par excellence* the poison used for criminal purposes in India. If it is impracticable to restrict the sale of all poisons, the indiscriminate vending of arsenic might be diminished by levying on it a prohibitory tax which could place it beyond the reach of the masses. The legitimate uses of arsenic in this country are not numerous, and for the purposes of certain trades it might be issued duty-free, but under the most stringent restrictions."

Dr. WADDILL, while officiating as Chemical Examiner in 1884 during the absence of Dr. WARDEN, referred to the necessity for legislative action similar to that existing in England in the following terms, which was noticed by Government in an interesting resolution also reproduced:—

"The necessity for the imposition of certain restrictions on the sale of poisons has on more than one occasion been represented and has attracted the attention of the Government. The Lieutenant-Governor in the resolution on the report for 1882-83 said that 'the general question as to the imposition of restriction upon the sale of poisonous drugs demands, and will receive, separate consideration.' But up till this time no steps have been taken in this direction. The restrictions in force in England work without trouble to the authorities there, and it is reasonable to suppose that in India as in England increased difficulty of access would soon render the use of poisonous drugs less frequent."

Government Resolution on Dr. WADDILL'S report:—

"The question of the restriction to be imposed on the sale of poisonous drugs has been more than once under the consideration of the Government. It is beset with many difficulties. Poisonous substances exist in every hedge and garden throughout the country, and in the present state of society in Bengal it seems quite impossible that the sale of poisons generally can be effectually controlled. What is more important is to check the ignorant compounding of English drugs and medicines. With this object provision has been made in the Bengal Municipal Act 1884 for the registration of shops for the sale of European drugs and for the employment in them of dispensers duly certified as fit persons to be entrusted with such duties."

In 1886 Dr. WARDEN thus commented on the above resolution:—

"It is true as was pointed out in the resolution on the Chemical Examiner's report for 1884 that the subject is beset with many difficulties. But there does not appear to be any valid reason why an attempt should not be made to restrict the sale of some, if not all, poisons. The state of society in Bengal is hardly likely to change materially for a few centuries. A complete bill similar to the English Poison Schedule of the Pharmacy Act, it is utopian to anticipate for India. The provision in the Bengal Municipal Act 1884 for registration of shops for the sale of European drugs is apparently intended to check the ignorant compounding of English drugs and medicines by unqualified druggists and for the registration of shops for the sale of European drugs. But this legislation, though highly desirable, is surely less important than some enactment which would prevent *baniyas* and native drug vendors from indiscriminately selling arsenic to any body who can afford to purchase it. The provision of the Bengal Municipal Act protects to some extent the European community and the higher educated classes of the natives. But the lower classes, most in need of protection, are not benefited."

In 1887 Dr. WARDEN again wrote as follows:—

"The increase for the last two years in the number of cases in which arsenic was detected in suspected articles, when taken into consideration with the fact that similar increase is also apparent for the same periods in the number

of cases in which arsenic was detected in human viscera, points to the fact that it is almost unknown to the consciousness of the people, and to the indifference to the indiscriminate sale of poisons. Legally, no enactment would prevent individuals from destroying themselves with poison if so disposed. Legislation is required to prevent the use of poison for homicidal purposes, and the one poison which is used in India for this purpose is arsenic.

The matter has also attracted the attention of the *British Medical Journal*. The following is an extract from an article published in the October number of 1892, dealing with the free sale of poisons in India:—

"We have from time to time called attention to the great danger to the public and the serious encouragement to the criminal tendencies occasioned by the unrestricted traffic in deadly poisons in India. We are aware of the old argument of those who counsel non-interference, viz., that in a country where deadly herbs grow in every road-side and open space, it is impossible to prevent their improper use. But the argument scarcely applies to the wholesale and retail dealings in *white arsenic*, which we understand can be bought without let or hindrance or any record of the sale or purchase, in every village bazar throughout the country. The Chemical Examiners to the various Governments invariably show that in about three-fourths of the cases in which poison is used with criminal intent, the article selected is *white arsenic*, not only for putting away of obnoxious individuals, but for the destruction of the cattle as well."

Such then are some of the recommendations which have been made from time to time during fifty years. What has been the result?

Result of previous recommendations.—The result so far has been the passing of certain sections of the Bengal Municipal Act of 1884 and of the Calcutta Municipal Consolidation Act. For convenience of reference these two sections are given in the foot-note below. They secure, as already stated, that all shops engaged in the retail trade of British Pharmacopoeia drugs should be registered, and that the compounders employed in these registered shops should be properly qualified.

No objection of any kind can reasonably be advanced against an Act directing the registration of shops engaged in the sale of medicines, and the employment therein of properly qualified persons. Measures of this kind are enacted not only in order to obtain the accurate compounding of medicines, but also in order to avoid those mistakes which arise from errors in the identification of drugs.

No doubt the operation of the Act in question has been to greatly minimise the risks arising from ignorant or careless compounding, so far as the majority of the British

Bengal Municipal Act, Section 332.—No shop or place shall be kept for the retail sale of drugs recognised by the British Pharmacopoeia not being also articles of ordinary domestic consumption unless the same shall have been registered in the Office of the Commissioners. Any keeper of such shop or place failing to register the same within two months after the section shall come into force or within two months from the date of the establishment of such place shall be liable to a fine not exceeding one hundred rupees. The Commissioners shall upon registration grant the keeper of such shop or place a license, which he shall be bound to display in some conspicuous part of his premises.

Pharmacopoeia drugs are dispensed. But the majority of people benefited thereby, especially the poor.

For even in the towns a very large proportion of the people, when sick, are treated by means of indigenous medicines.

Inapplicability of exempting indigenous medicines from the operation of the Act.—It would naturally be suggested that the sale of indigenous drugs ought to be attended with a certain amount of care. Why then are indigenous drugs exempted from the operation of the Act?

A poison does not cease to be a poison because it happens to be excluded from the British Pharmacopoeia.

As already stated, the Act applies to British Pharmacopoeia drugs only. There are however certain drugs common both to the British Pharmacopoeia and to the indigenous list, among them being *aconite*, *nux vomica* and certain *arsenical* and *mercurial preparations*.

The drugs common to both lists are specially exempted from the operation of the Act, provided they are not sold in shops where British Pharmacopoeia drugs are dispensed on prescription. One is prompted to ask, whether such drugs as *aconite* and *arsenic* change their character with change of locality, and whether they cease to be dangerous when dispensed without the help of a prescription.

The special exemption of indigenous drugs from the restrictions imposed by the Municipal Act, was no doubt made with the wise object of interfering with the practice of indigenous medicine as little as possible. But the

No person shall compound, mix, prepare, dispense or sell any drug in any such registered shop or place unless he be duly certified as a fit person to be entrusted with such duties under rules made for that purpose by the Local Government.

Provided that the provisions contained in this second clause of the section shall not come into operation until after the expiration of a period of six months from the publication of a notification to that effect in the *Calcutta Gazette* by the Local Government:—

"Nothing contained in this section shall be construed to apply to the sale of drugs, used by practitioners of indigenous medicines, whether recognised by the British Pharmacopoeia or not, when such drugs are not sold in a shop or place where medicines recognised by such Pharmacopoeia are dispensed on prescription."

Calcutta Municipal Consolidation Act, Section 268.—No shop or place be kept for the retail sale of drugs not being also articles of ordinary domestic consumption, unless the same shall have been registered in the office of the Commissioners. Any keeper of such shop or place failing to register the same within two months of the passing of this Act, or within two months from the date of the establishment of such place, shall be liable to a fine not exceeding Rs. 100. The Commissioners shall, upon registration, grant the keeper of such shop or place a license, which he shall be bound to display in some conspicuous part of his premises.

No person shall compound, mix, prepare, dispense or sell any drug in any such registered shop or place unless he be duly certified as a fit person to be entrusted with such duties under rules made for that purpose by the Local Government.

Any person not being a holder of such certificate, who shall compound, mix, prepare or sell any drugs in any such registered shop or place, shall, on conviction before a Magistrate, be liable to a fine not exceeding Rs. 50 for each offence, and any owner, occupier or keeper of any such shop or place who shall employ any such uncertified person to perform any one or more of such duties shall, on conviction before a Magistrate, be liable to a fine not exceeding Rs. 200, and shall be further liable at the discretion of such Magistrate to suspend his license.

Nothing in this section contained shall be construed to apply to the sale of drugs used by practitioners of indigenous medicines when such drugs are not sold in a shop or place where medicines are dispensed on prescription.

practice of indigenous medicine does not consist solely in the use of poisons, and it will not be interfered with if the sale of deadly poisons is entirely removed from the hands of the ignorant *bumiah* and *badias* and entrusted where necessary to the practitioners of indigenous medicine themselves.

The provisions of the Act in its present form are difficult to enforce, as it contains no schedule of European drugs, which may be sold by *bumiahs* on the supposition that they are utilized in the practice of indigenous medicine.

It is reported that as a consequence of this, a large sale of European drugs is carried on in some *bumiah*'s shops.

Unrestricted wholesale trade in European drugs in Calcutta.—In Calcutta there is a very considerable wholesale trade in European and other drugs, in addition to the retail trade of the chemists and *bumiah*'s shops. The wholesale dealers reside chiefly in Burrabazar and Chandney, and carry on their business subject to no restrictions whatever. White arsenic, chloral hydrate, hydrocyanic acid, morphine and strychnine may be purchased at one of these wholesale dealer's shops in large quantity by any individual, however unfitted to be in possession of poisonous drugs.

Wholesale purchase of Medicine for domestic use; its mischief.—It may be said that the wholesale purchase of medicine even for domestic use in cases of sickness is the common practice among the educated inhabitants of the large towns of Bengal, provided no compounding is required. A private person, when directed by his medical adviser to take a certain medicine, or when taking a medicine on his own responsibility, usually purchases a considerable quantity at one time from a retail or wholesale druggist, without of necessity presenting a prescription. In such instances the dose is measured by the individual at his own home and not by the chemist.

Provided the drugs bought and sold in this manner are not in any sense poisonous, no very serious objections can be raised to the plan, which is in addition apparently ratified by the approval of medical practitioners.

But in the case of poisonous drugs, no more dangerous plan could be imagined. At the present time there is no law in India regulating the quantity of a poisonous drug which any single person may be permitted to purchase at one time excepting the case of opium, where the quantity is limited to 2 ounces or enough to poison, may be 20 individuals.

Consequently individuals addicted to the use of morphine, chloral hydrate or any other drug find in India no difficulty in procuring any quantity of the drug for which they have acquired a craving. Needless to say this is only one type of mischief resulting from the present system.

Legitimate functions of wholesale and retail druggists.—If the wholesale druggist was permitted to sell poisons to authorized licensed persons only, and the retail druggist might sell poisons only on prescription, much of the mischief at present being wrought could be prevented.

At the present time the retail druggist may do a wholesale business in poisons or other drugs without let or hindrance, provided he has the purchasers.

Still taking the present condition of the trade in drugs, notwithstanding the enactment of legislative measures, it may now legitimately be urged that these measures require amendment.

(To be continued).

SOME EXPERIMENTS ON TETANUS.

By A. MITRA, BAI BAHADUR, M.B.C.P., L.B.C.A. (Edn.)

Chief Medical Officer, Kashmir.

On the 5th July last, a patient was admitted into the Kashmir State Hospital with fracture of both clavicles, of 7 ribs, of right humerus and the manubrium of the sternum. The patient was a mason, and had fallen from a scaffolding. For two days there was considerable dyspnoea, which however, gradually disappeared, and the patient was apparently progressing towards recovery, when on the 10th day after the injury, lockjaw was noticed. In spite of free exhibition of sedatives and antispasmodics, the case gradually passed from bad to worse, and ended fatally on the 15th day.

This patient was kept in a side room of the military ward of the hospital—a room very well ventilated and lighted and floored with boards with ventilating space below and earth 3 feet from the planks. After the death of the patient the room was fumigated with sulphur and the floor and the bed (a Lawson Tait iron bed) thoroughly washed with carbolic water.

Four days after the death of the patient a robust Pathan cooly, aged 40, was admitted into this room with an injury on the leg caused by a landslip on the Jhelum Valley Road. There was compound comminuted fracture of both bones of the leg and extensive laceration of the soft parts, extending up to the knee-joint. The patient was admitted on the 4th day after injury. Temperature on admission, 99°F., and the wound looked very unhealthy and sloughy. The patient was immediately anesthetized, and amputation of the thigh at the lower third was performed by double flap method. All was progressing well. Temperature did not rise above 101°F. Wound was treated strictly antiseptically by zinc-cyanide of mercury dressing. On the 14th day after the operation, lockjaw was noticed. Soon after, he was in a state of opisthotonus with frequent muscular spasms, and perspired freely. He was able to swallow, and ample nourishment was given. A mixture containing 5 drops of chloroform, 5 of tincture of belladonna, and 10 grains of bromide of potash was given every three hours. The patient was in the habit of smoking *charas*, which was allowed as much as he wanted, as it greatly relieved spasm. On the 19th day the patient died. After death the stump was carefully examined and all nerve-ends were found free, and the ligatures were found to have included nothing but the arteries.

The occurrence of two successive cases of tetanus in one room was striking, and suggested infection by germs. Being thus interested in the question, I conducted some experiments, the results of which I now describe:—

Soon after the death of the patient, a little pus was taken from the wound and mixed with a neutral bullion, 10 c.c. of this was injected into the peritoneal cavity of a fowl. On the 12th day after the injection the serum or blood of this fowl was injected into dogs under following conditions:—

(1). Dog A received an injection of the tetanus poison simultaneously with an injection of the serum.

(2). Dog B received an injection of the serum one hour previous to his being injected with tetanus poison.

(3). Dog C received an injection of the serum one hour after life being injected with the poison.

(4). Dog D received only an injection of the poison.

(5). Dog E received only an injection of serum.

The results were as follow :—

(1). The fowl died on the 12th day, and on *post-mortem* peritonitis was found.

(2). Dog A died on the 7th day with marked muscular spasms.

(3). Dog B died on the 12th day with entirely different symptoms, but with no muscular spasm.

(4). Dog C died on the 4th day with marked muscular spasms.

(5). Dog D died on the 5th day with marked muscular spasm similar to dogs A and C.

(6). Dog E had no symptoms.

Now there were two kinds of death in the above series of experiments: one in which muscular spasms were present and in another they were absent. The fowl died of peritonitis, dogs A, C and D died with spasms, and dog B died not from tetanus, but his death was due to septicæmia, caused by other pathogenic micro-organisms present in my culture which was not an isolated one. The above facts do not prove one way or the other the usefulness of antitoxin serum in the treatment of tetanus; for the artificial tetanus produced in my dogs was not a pure tetanus, because with the poison of tetanus I probably also introduced other pathogenic germs, but they prove :—

(1). That serum of an immunised animal being injected previous to the introduction of the toxine was capable of destroying the tetanic element in it.

(2). If simultaneously injected, the tetanic toxine gets the upper hand.

(3). *A fortiori*, if the toxine gets a start, the serum is incapable of destroying the poison.

(4). That the serum itself is harmless.

From the foregoing facts it appears that tetanus is an infective disease due to a germ. How the germs appeared in the room of our hospital, it is difficult to conjecture, there having been no tetanus in the hospital for nearly five years, nor any in the neighbourhood which I ascertained carefully. There was loose earth under the boarding of the room. Did that afford suitable growing ground for the germ? After the death of the second case similar steps for disinfection, as were taken after the first, were also taken, and on the 8th day after the death of the second patient it was opened for admittance of other cases, though for nearly two months no important surgical case was allowed in it.

If the antitoxin serum is able to withstand the effects of tetanus poison if introduced before infection takes place, and as tetanus is a most dreadful disease which adds to a certain extent to the mortality after severe operations and injury, why should we not take the precaution of injecting the antitoxin serum whenever it may be available in such cases of operations or injury after which tetanus may likely follow?

BILIARY CIRRHOSIS OF CHILDREN.*

BY JOGENDRO NATH GHOSH, L.M.S.

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Literature and general features of the disease.—Under this title, I venture to lay before you some facts connected with what I may call a new disease, which has lately appeared among the children of certain classes in Calcutta and other parts of Lower Bengal. On account of its generally unsuccessful treatment and fatal termination, it has, of late, drawn considerable attention and been the subject of serious thought in the minds of medical practitioners and the general public. The literature on the subject of this disease is still very meagre.

The peculiar features of the disease are that its onset is insidious, that it usually prevails among infants under the age of one year, that it seldom attacks children after they have passed the third year. The attack generally commences on the 7th or the 8th month, chiefly at the period of dentition or the mother's next conception. The children of some parents are particularly liable to the disease. In one family, I have observed fourteen children of the same parents die one after the other. Cases of attack on the third or fourth month, or even a few days immediately after birth of the child, have also been noted. Children in Calcutta, as well as in the districts of Bengal, whether malarious or non-malarious, are equally subject to it. It makes no difference between the children of the intemperate, the sober or the teetotaler. It spares neither rich nor poor, though the well-fed children of the wealthy and the middle classes are more liable to it than the ill-fed children of the poorer classes. Mahomedan and Eurasian children suffer less than the Hindus. Hardly any cases are seen among Europeans. In those families where the disease prevailed, I noticed a few children escape apparently from being nourished by healthy wet nurses. When the disease was first noticed in Calcutta, more cases were found among male than among female children; but of late the proportion seems to be less, and more female children than formerly now come under the notice of practitioners. Still, I shall point this out as a peculiar feature of the disease. Another peculiarity noticed is that the female children mostly attacked are usually the first-born of the parents, and who are necessarily the objects of great care in a family.

It has been observed that a female child escapes the malady after the successive deaths of several males that preceded her, though again the next male child succumbs to it. Children of very healthy parents are not exempt, and the disease appears to be quite unconnected with long standing purulent discharges, scrofula, syphilis, malaria, fever, or any chronic constitutional disease. In a family of several brothers living in the same house and under exactly the same conditions as regards food, it is rare to find the children of more than one of the brothers affected with the disease. In one family of three brothers living together under the Hindu family system, one brother had fourteen children, most of whom died about one year old, while the ten children of the other brothers remained quite healthy. This is the rule, but exceptions may have

* A paper read at the Indian Medical Congress and sent to the Secretary for publication.

comes under observation in which the children of two brothers living together were affected by the disease.

The enlargement of the liver is gradual, and is unattended with pain. The subsequent contraction is, however, rapid. The termination is generally fatal, death being mostly due to cholemia. The disease runs its course from 3 to 12 months, though one case has been known to end fatally within a fortnight of the attack, and the patients in two other cases, which came under my observation, lingered on for three years, and in these cases change of climate was tried in vain. In my experience, out of about 400 cases, only 6 recovered, making a mortality of 98.5 per cent. The diagnosis in the case of 3 is, however, open to doubt. Of the remaining 3, one child was sent out for change at the very commencement of the disease, and two recovered after the first symptoms had fully manifested, but in none of these cases was there persistent jaundice, which in my experience is a fatal sign.

Historical Sketch.—In 1877, a few cases came under my observation. All these patients were in the last stage of cholera, with contracted liver, ascites and edema of hands and feet. I mistook some of these cases for malarious enlargement followed by cirrhosis of the liver. During the next two years, I carefully watched a few more cases, I found the liver hard and resistant to the touch, and the enlargement was great, but accompanied with little or no pain, and slight fever. At the last stage, jaundice set in, the liver gradually contracted, and the little patients died from bile poisoning. The disease was then supposed to be some of degenerative liver of children and was called "Amyloid, Fatty or Infantile liver." Since that time I had occasion to notice numerous cases of this kind, and the disease seems to be spreading not only in Calcutta, but also in the districts, as cases are frequently brought to town for treatment. I consulted several leading and eminent physicians, both European and Indian, but none were able to throw much light on the diagnosis and treatment of this serious malady. Since 1887, a number of cases were brought before the meetings of the Calcutta Medical Society, and papers read and the subject fully discussed, but until recently, no definite solution was arrived at regarding the true nature of the disease. Parental objection and caste-prejudice stood in the way of a thorough and extended investigation into the nature of the disease by *post-mortem* examination in well-authenticated cases. The medical science, therefore, is deeply indebted to Surgeon-Major J. B. GIBBONS for the light he has now thrown on the subject, and the medical profession of Bengal for the correction of errors under which it hitherto hopelessly labored. As Professor of Pathology in the Medical College, Calcutta, Dr. Gibbons always took a particular and an active interest in the disease, and he availed himself of the opportunity to hold *post-mortem* examinations in a few hospital cases, which led to the discovery that the disease is a form of BILIARY CIRRHOSIS, presenting features which distinguish it from diseases of a similar nature described in medical books. He placed the results of his investigation and discovery before the Medical Society, exhibiting and illustrating motions of the diseased liver, and thus placing beyond all doubt the true nature of the disease. Since that time the medical profession has termed it "Biliary cirrhosis of children."

Definition.—The disease may be defined now as a painless enlargement of the liver, hard and resistant to the feel, beginning with slight fever, occurring in children only, and terminating almost invariably in death.

SYMPTOMATOLOGY: First symptoms.—The onset of the disease is so very insidious that, as a rule, nothing is noticed by the parents until the liver has attained a considerable size. The early symptoms which attract the mother's notice are nausea, occasional vomiting, sallow complexion, warmth of hands and feet and a certain amount of constipation with straining at stools. The child also refuses food, gets irritable, loses its cheerfulness, wishes to lie down on damp ground and gets a little fever towards night or early in the morning. Some thirst also is noticed, as the child looks wistful at the sight of water and tries to lay hold of the vessel containing it. A slight icteric tinge is also sometimes observed in the eyes (conjunctivæ).

Enlargement.—When the child is brought under a physician's observation, the liver appears enlarged, at times so considerably that it extends as far as the umbilicus or even beyond it to the iliac crest. The anterior margin of the liver is well defined, prominent at first, and feels smooth and rounded; gradually it becomes thinner, assuming the shape of a knife-back-edge, and at the last stage of the disease it can be grasped by the fingers. The enlargement is uniform, the liver being hard and resistant; painless first, but slightly painful when jaundice supervenes. The left lobe generally enlarges first, sometimes reaching as far as the spleen, which also in most cases enlarges simultaneously. Occasionally the right lobe enlarges so much that its anterior border overlaps the left lobe, and the notch between the lobes is so displaced to the left as to be mistaken for the hilum of the spleen. At this stage the liver goes on enlarging, gradually filling up the abdomen, which bulges out, the superficial veins becoming prominent. As the liver enlarges, the child becomes more markedly ill, with fever, loss of appetite, more pronounced jaundice, accumulation of fluid, &c.

General appearance.—The general appearance of the patient presents no marked change in the early stage of the disease. After a short time the features exhibit a dusky appearance; later on the skin becomes harsh and dry, the complexion slightly yellow; the feet and hands may become puffy; this last symptom usually disappears after a few days, but returns again.

Spleen is generally hard and enlarged, but not to a considerable extent.

Constipation is a well-marked, obstinate symptom. The stools are yellowish at first, then clayey and muddy, and lastly whitish and devoid of bile.

Urine at the commencement is clear, but gradually becomes bile-tinged, and lastly deep yellow, unfruct-colored, the stain of which does not disappear on washing. There is very little or no perspiration.

Fever is slight at the beginning, but it increases with the progress of the disease, and the maximum is reached when the jaundice is pronounced. There is no shivering or ague with the fever; in some cases it remains continuous, while in a few it only appears late with the jaundice.

Ascites.—In some cases a certain amount of fluid accumulates in the peritoneal cavity, with edema of hands and feet.

Jaundice.—The most important symptom as regards prognosis is the appearance of jaundice. In the early stage, a slight discoloration of the body may occur, but this is not to be confounded with the deep and persistent jaundice which attends the later stage of the disease. At this time the whole body gets discolored and the conjunctivae become bile-stained. The onset of the intense and persistent jaundice, which occurs in the later stage of the disease, is a symptom of the gravest import.

Contraction of the liver.—After the appearance of the jaundice, the size of the liver begins to undergo diminution. In a few cases, I have observed the contraction so very rapid that in 48 hours it has come up from the umbilicus to the inside of the costal arch. This contraction has often been mistaken for a favourable symptom.

Etiology.—The main cause of this serious malady is, I believe, unwholesome food and faulty digestion. The milk either of the mother or of the cow is the principal article of food for our infants. Mahomedans and Eurasians feed their children occasionally with animal broth. The Hindu mother always nourishes her children from her own breast, and it is among the Hindus that the disease is most prevalent.

First, as regards the mother's milk.—The practice is not uncommon for a mother in a state of pregnancy to suckle her child. Her system must then be undergoing a change, rendering her milk quite unfit for the child in her lap. The double strain to which she is subjected may also contribute to a further deterioration of the nourishment she can afford at this time. Indeed, numerous cases have been noticed of children being attacked with the disease immediately after her next pregnancy, specially in cases when the children of the same parents died one after the other of this malady. In the case of the family of which a history will be given hereafter, and in which 14 children successively died of this disease, I was able to clearly establish this point. The mother usually became pregnant from 8 to 12 months after each delivery, but still continued to suckle the child on the lap. Within a short time, the signs of the disease used to appear in the suckling child. As I have noticed this fact in many other cases, I am inclined to attach very great importance to it as one of the potent causes of the disease. I am also of opinion that the Bengali race, specially the females of the middle and the richer classes, are gradually undergoing degeneration, and getting indolent, dyspeptic and enfeebled by early marriage and premature and frequent pregnancies. All circumstances which tend to lower the mother's health equally tell against the health of the children born of her. A healthy child cannot be expected from an unhealthy mother.

Second, as regards cow's milk.—This, the next best diet of our infants is so much adulterated in large centres of population that it may be pronounced as quite unsuitable for infant food. Besides adulteration of the milk, the cows are kept in unhealthy sheds, and fed on refuse and other unwholesome food-substances. Great carelessness also prevails in the matter of keeping the milk. The vessels are not properly cleaned, and stale milk is often acid as fresh. In feeding the child with cow's milk, even the parents themselves do not take sufficient care as regards

the quality of the substance used. Stale milk is given to the child late at night or early in the morning, and the unsuitability of the milk due to a difference in the age of the calf and that of the child is never taken into consideration.

Irregularity in feeding and over-feeding.—No regularity is observed in feeding the child. Whenever it cries or gets cross, in order to pacify it, a certain amount of milk is poured down its throat, irrespective of quantity or quality, or the time or interval after which it is fed. Male children, who are generally the objects of great solicitude in a Hindu household, are over-fed with pure cow's milk, under the impression that it would make them robust and healthy and, as stated before, the disease is more prevalent among males than among females.

Other causes.—The primary cause of the disease may, therefore, be safely stated as mal-assimilation. Nature is also outraged in other directions. For instance, many children are not fed with any other substance but milk even after the cutting of teeth. Besides these causes, the over-crowding and general unsanitary condition of houses in towns, where the high rents compel people to crowd together, absence of exercise, and want of fresh air must by deteriorating the health of the child render it susceptible to disease.

Predisposition.—There also appears to be a predisposition in many cases. This predisposition seems to be inherited, as is proved by cases in which the children get the disease only a few days after birth; by successive deaths of a number of children in the same family, in spite of all the precautions taken under the best medical advice; and by its occurrence among children of uterine brothers and sisters.

In support of the above arguments, I will now cite only a few of the numerous cases that came under my immediate observation:

(1) A, present age 52, has been the father of 18 children by the same wife, all dead. Of the first 4 the cause of death is uncertain, and the next 8 are supposed to have died of biliary cirrhosis, but I cannot be positive about them. I can, however, certify that the remaining 11 died of biliary cirrhosis.

The father of A lived to a good old age and died of diabetes and asthma; his mother died of fever and liver complaint. He married thrice. By the first wife he had four daughters, all dead, but none from biliary cirrhosis. In order to have a male issue, he married again when the first wife was living. By the second wife he got a son, but both the mother and the child died shortly after, though not from biliary cirrhosis. He married a third time, while the first wife was still living. By the third wife he had two sons and one daughter. After this, the first wife gave birth to A.

A is one of three brothers and a sister, though not uterine. The two brothers are dead: one died of cancer of the throat and the other from gangrene due to diabetes. Both the brothers were married and had children. The eldest had four sons and three daughters, all healthy. The other brother had three sons and four daughters, all healthy; the sister had two sons and two daughters, all healthy. A himself once suffered for some years from

disturbance of digestion and the consequent anorexia, but is now cured, and at present he is in fair health.

A's wife has two brothers and two sisters, all married and with families. The brothers have children; all are living. The sister has only one child, which is living. The other sister had seven children, of whom two died, but not from liver disease.

Briefly, neither among the father's nor the mother's relations have any of the children shown the disease. The wife's father is dead, but her mother is living. The wife enjoyed good health until recently, when she began to suffer from dyspepsia. She was married at the age of 11, and her first child was born when she was 13. She had altogether 18 children; no miscarriage. The children were born at intervals of 15 to 24 months, and lived to the average age of 12 months; only one child reached the age of 2½ years. Neither A nor his wife ever suffered from syphilis, scrofula or rickets. I saw the last 14 children, and am positive that 11 of them died of biliary cirrhosis. Some of these succumbed shortly after the disease appeared; others lingered for a year or more. The average duration of the disease was about 6 months. Death, as a rule, occurred with well-marked signs of cholemia, after the contraction of the enlarged liver had begun.

(2) The history of another family illustrates well some of the peculiar features of the disease. B, a qualified medical man, resident of Calcutta, some years ago left his wife and family in his village home in a malarious district. His wife had altogether 13 conceptions. Numbers 1 and 2 miscarried; 3 and 4 still-born; 5th, a female child, died of fever with enlarged liver and jaundice. This occurred some years ago before the subject of infantile liver attracted attention, and the death was attributed to malaria. Nos. 6 and 7, twins, both males; one died immediately after birth; the other got enlarged liver and jaundice and was removed to Calcutta for treatment, where the family have lived ever since. The disease of the child was now diagnosed as infantile liver; it died on the 15th month. The 8th child, a daughter, was born in Calcutta and was nourished by the mother; she is healthy, now married. The 9th was a son, nourished by the mother, who died of biliary cirrhosis, though the disease was recognised early and every effort made to save him, including change of climate. The 10th child, also a boy, was never given the mother's breast, but was suckled by a healthy relative, who happened to have been delivered at the time and who had sufficient nourishment for both children. This boy is living and quite healthy. About two years after the birth of this boy, the 11th child, another boy, was born. He was suckled by the mother and is also healthy. One daughter (12th) was subsequently born and has lived. The 13th was still-born and the 14th, a daughter, is living and healthy. Not taking into account the miscarriages and the still-born, out of a family of 9 children, 3 died, 2 certainly from biliary cirrhosis, the other probably from the same cause. As to the history of the parents, the father, B, is not a very strong man, though never ill. At one time he had some enlarged glands in the neck which suppurated. But he suffered from no other disease. The mother is a

healthy, robust woman. The father had two brothers; one had three children, of whom one son died of biliary cirrhosis.

(3) The following case is I think of importance:—C has been married three times. By the first wife there was one child, healthy; by the second wife there was one child, also healthy; by the third wife he had three children, all of whom died of biliary cirrhosis. C is healthy, and his third wife is healthy too, though not very robust.

(4) Yet another case of the above kind may be mentioned. D, an Assistant Surgeon, was married thrice. By his first wife he had one son and one daughter; both healthy. His second wife was childless. By his third wife he had six children; first two daughters, all healthy. The third, a son, being the first male, was given from birth undiluted cow's milk in addition to mother's nourishment. The mother was a healthy woman and had plenty of milk. This child died of biliary cirrhosis. The others are healthy.

Let me cite one more instance. (5) E has two wives, both have children. First wife's only child died of biliary cirrhosis. Second wife's children died from other causes. No child alive.

Many instances may be mentioned of the disease having attacked the children of only one wife of the same husband, while those of the others having enjoyed a perfect immunity from it.

Diagnosis.—It is difficult to diagnose the disease in its early stage. But once the first symptoms are developed, the generally uniform, painless enlargement of the liver, which is firm and resistant, leaves no doubt as to the nature of the disease. The enlargement becomes enormous, and subsequently contraction ensues with the usual symptoms mentioned before. It may be stated here that the little patient can be best examined when it is asleep.

Differentiation.—The disease may be mistaken for amyloid liver, but the latter is very rare in this country, and its causes, as a rule, are absent. The characteristic enlargement and the progress of the disease, however, soon clear away all doubt. From enlargement of the liver connected with malaria it may be distinguished by its occurrence among children removed from ordinary malarious conditions. It is especially the disease of large towns like Calcutta, and is easily distinguished from the absence of features which form the principal characteristics of malarious fever. The points which differentiate Biliary Cirrhosis from other liver diseases of a similar nature are given by me in detail in the comparative tables published in the report of the proceedings of the Calcutta Medical Society for December 1890.

Duration.—As said before, the attack generally takes place when the child is less than a year old. The duration of the disease is from three to six months, death generally occurring from the 15th to the 18th month of life. In exceptional cases which came under my observation, death on the one hand occurred within a couple of weeks, while on the other, the patient lingered on for three years.

Prognosis.—The prognosis is extremely unfavorable and gloomy. In my experience, out of about 400 cases, only six recovered, but in three of these the diagnosis is open to doubt.

Morbid Anatomy and Pathology.—For an account of the morbid anatomy and pathology of the disease, I would refer you to the article written by Dr. J. B. Giasone in the *Scientific Memoirs*, Part VI, and to the papers which lie read before the Calcutta Medical Society.

Treatment: Instructions not carried out.—Hitherto the results of treatment have been very unfavorable, even with cases which have been under observation from the early stage. I believe these unfortunate results are mainly to be ascribed to the difficulty which exists in having any line of treatment carried out in its entirety. I refer especially to the difficulty in the matter of food. I place the most reliance in a complete change of diet, holding that the disease is mainly due to unwholesome food. Much difficulty is experienced in getting the parents to carry out the instructions in this matter. When a case occurs in a suckling-child, the first instruction given is that the mother should at once stop giving her breast to the child, and to feed it with some other food. This is seldom carried out. The reasons for this are obvious; the child accustomed to suckle naturally shews a reluctance to take to any other food, and the mother hearing its cries, gives way and suckles it, notwithstanding all instructions to the contrary. This is especially the case at night, when the child lies alongside its mother.

Change of diet.—As said before, the treatment which I now adopt and which appears to offer the best hope of success, is mainly dietetic. When I see a case, I enquire as to the food given to the child and generally make a complete change in this. I always forbid the mother's nourishment and substitute in the case of young infants a healthy wet-nurse if available, or, if not, a specified quantity of pure cow's milk diluted with water in proportion to the age of the child, and sweetened with sugar.

When I first saw cases of this disease, I tried different kinds of food. In some cases, I stopped milk of every description altogether, and fed the children on soup and various kinds of artificial food,—MELLIN'S, NESTLÉ'S, BÉNGAL'S, &c. This was the diet I adopted in the case of young infants. To older children, who had out some teeth, I gave solid food in small quantities, such as,—biscuits, bread, home-made *rotis*, a little rice and other grains, together with *dal*, fish-soup and milk or only the latter. In several cases, I fed the children entirely on asses' milk. Briefly, I may say that I believe I tried every kind of food. But as I have remarked, the directions about diet were seldom carried out by the parents for more than a few days, so that the want of success is not to be attributed to the line of treatment adopted in the matter of food, but rather to the failure in carrying out the instructions. In the case of older, post-suckling children, difficulty also exists in getting the parents to prepare the food ordered and to prevent the child getting substances of an unsuitable character. In most cases, however, I find my instructions fairly carried out for a week or so, but the parents observing no immediate marked improvement, begin to doubt in the efficacy of dietary measures, and revert to the food the child was in the habit of taking before the attack of the disease. In the matter of administration of medicines, much less trouble is experienced, the medicines being usually given according to the directions.

Therapeutically, medicines have been tried with the view of combating the morbid process going on in the liver, and for this purpose mercury, iodide of potash, hydrochlorate of ammonia, phosphate of soda, &c., have been used in all forms, but I cannot attribute any benefit to them.

To combat the obstinate constipation, which is a marked feature of the disease, laxatives and cholagogue purgatives have been used. My experience, is that in the early stage, no great difficulty is met with in keeping the bowels open, and any simple purgative acts very well at this time. But as the disease advances, it will be found that the purgatives used lose their effect and have to be given in increasingly large doses. This constipation is one of the difficulties which the physician has to overcome. Of late, I have been using the freshly prepared juice of the leaves of *nyctanthes arborescens* or the *will* flower tree, in teaspoonful doses taken in the early morning, and this has usually acted well, though when the stage of marked jaundice is reached, it, like every other drug, appears to be powerless.

External applications over the liver, such as blisters, mercurial ointments, and iodine have been tried, as also nitro-muriatic acid packs, &c. None of these seem to have any influence on the progress of the disease, though at times no doubt, they may be useful.

Change of climate is undoubtedly beneficial in the early stage, but later has no effect. Its influence is probably due to the improvement in general health.

On the whole, I have found that when the disease has reached the stage of persistent jaundice and contraction of the enlarged liver, little benefit can be hoped for. It is in the early stage that the change of food and improvement in general hygiene can be expected to lead to recovery.

Conclusion.—I have endeavoured to lay before you the nature of a new disease which is daily bringing death and desolation to numerous households in Bengal. The mother's tears and the father's sobs must often have rent the heart of many a practitioner in Calcutta. If the parents' sorrow is intense, the physician's shame is not the less deep. He daily sees before his eyes an innocent little infant, striving to be playful in spite of the cruel disease, but slowly and surely dwindling away to death. Yet, he can do nothing to save the little thing from an untimely end. In my opinion, the disease ought not to be fatal, at least its pathology does not justify such a hopeless prognosis. I therefore earnestly appeal to you to pay attention to this matter, to try to discover some effectual remedy, and to save the profession from the helplessness under which it now labors.

PILOCARPINE IN RHEUMATISM.

DR. DRAPIER, of Auvillers-les-Forges, calls attention to the fact that, though sodium salicylate may be regarded as a specific in articular rheumatism, it sometimes causes toxic symptoms so grave as to render its use impossible. In one such case, a patient who suffered from two or three attacks of rheumatism yearly, he used hypodermatic injections of pilocarpine, formerly advocated for the disease, using 0.01 gramme (1 grain), which led to complete recovery within ten days.—*Universel Med. Jour.*

THE ANTIPYRETIC TREATMENT OF FEVERS.

By BRIG. CAPT. GEO. S. THOMSON, M.B., C.M., I. M. S.,
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In this paper two questions have been proposed for answer: (1) What is the best modern treatment of fevers? (2) Should antipyretics be used in the routine treatment of fevers? These questions may be best solved by contrasting the methods of treatment in vogue some seven years ago, with the practice that increased clinical and personal experience have convinced me as being most satisfactory and efficient. On my arrival in this country in 1888, diaphoretic mixture and quinine formed the routine treatment for an ordinary case of ague. At that time I had with me 2 ozs. of antifebrin, and began to use it for obstinate cases of ague of both remittent and intermittent type. Patients getting diaphoretic and quinine mixture used to remain 20 to 30 days in hospital, whereas those who were on antifebrin and antiperiodics went out in 4 to 5 days.

Cases, side by side, as far as possible under the same hygienic conditions, and presenting as nearly as can be, the same severity and type of disease, and similar constitutions, were treated in three groups for the purpose of instituting a comparison. Some were treated with Aq. camph. and quinine; some with mist. diaphoretic and quinine; and some with antifebrin and antipyrin alone; and with these drugs combined with quinine alternately. In a short time one was convinced of the superiority of the use of antipyretics.

(1). By the rapidity of recovery; (2) by the safety in use; (3) by the satisfaction in the feelings of the patient.

The dose usually administered was 5 grains every time the temperature rose to 102°F. or over; and at the time of return, or expected return of the paroxysm.

* The patients used to ask for the "powder" medicine (antifebrin), and always felt their worst symptoms relieved as if by magic; the headache, pain in the loins, back and limbs disappeared in from half to two hours' time; the patient fell into a sleep, or perspired, and woke up with a sense of great relief and ready to take nourishment and quinine with some fair chance of its absorption and assimilation. A further and more extended trial of antifebrin and antipyrin in all forms of ague and fevers has led to the adoption of a combination of both drugs in suitable dosage, i.e., 5 grains of each, administered dry in powder, with a mouthful of water to assist in swallowing; as a safe, satisfactory, and effectual treatment. Phenacetin has also been used but, it has not proved so satisfactory as the combination of the other antipyretics, for with the painful nervous symptoms and (in some patients) with head symptoms, it seemed to quiet the patient without controlling the fever. The use of the combination of the two drugs is based on their physiological action, as antifebrin begins to act on the high temperature a short time (half an hour) after administration, and reaches its maximum effect quickly, i.e., at the end of two hours; whereas antipyrin acts more slowly, taking effect two hours after being ingested, and has a more prolonged action, up to 8 hours afterwards. The antifebrin knocks down the temperature rapidly and keeps it down till the antipyrin

comes late action slowly and persistently comparatively, and thus the patient has some hours of freedom from excessive temperature, and relief from harrying and wearying head symptoms. In my own person I have frequently cut short an attack of ague by a dose of the combined antipyretics. In one instance the bed shook violently under me from repeated and great shiverings, the head was hot, dull, and heavy, the eyeballs painful; light and noise acutely unbearable, and prostration complete; yet in two hours' time I felt perfectly well and able to sit up, move about, and take food with all symptoms of the attack completely removed! In the doses noted the ill-effects met with by others have never occurred in my experience; and during 7 years' use of this formula among upwards of 50 sick daily, and in a population of about 10,000 people, no drawback to the usefulness of the drugs has been noticed by assistants, Hospital Assistants, or by me personally.

Besides, it is claimed that in remittent and intermittent fever, hectic fever, pneumonic fever, and the fever of phthisis, antipyretics have not merely a symptomatic, but a really curative action, and with other suitable adjuncts to rational treatment, have resulted in the cure of many cases of such fevers in my hands.

The reckless use of these newer antipyretics in injudiciously high doses, at too short intervals, and too long continued, has engendered an impression that they are dangerous; has limited the general usefulness of the drugs as therapeutic agents; and has brought them into undeserved neglect. Our elder brethren especially, look on them with distrust as a mere pursuit of the latest fadist in medication; but I can assure them that without their aid one feels helpless at the bed-side of a fever-patient and that it is to be borne in mind that their ascribed dangers have been the result of mal-administration of the drugs in most instances or of the use of impure specimens in others.

Without those antipyretics our elder practitioners rely on large doses of quinine, which in the irritated and catarrhal state of the gastro-intestinal mucous membrane, acts as an irritant and cannot be absorbed, or if absorbed at all, causes congestion of the brain and its membranes, and of the liver, and internal organs; and this is especially to be avoided, as those organs are already pathologically congested by the fever, for the cure of which the drug is being given. During the intermission or remission produced by previous antipyretic treatment, or as a natural break in the course of the disease, large or small doses of antiperiodics, such as quinine (5 to 20 grains) with liquor arsenicalis, etc., come in useful, and have a fair chance of being absorbed owing to the quieting of the circulation, and the sedative action of the antipyretics on the nervous symptoms, and consequent reduction of the gastro-intestinal catarrh.

A retrospect of the past seven years' professional work in the treatment of fevers impresses upon my mind the firm conviction that the use of antipyretics in the routine treatment of such diseases is a distinct therapeutic advance. The adoption of such an advantage yields the best hope of successful cases when used with due regard to the accompanying state of the patient under treatment; for the

patient and his disease must be treated as a whole, if misadministration of drugs and mere quackery are to be avoided. It is for the purpose of emphasizing the use of antipyretics as a routine part of the modern treatment of Indian fevers, that I bring forward the claims of antifebrin and antipyrin in this paper. The medical practitioners of a decade ago recommended a purge, diaphoretic, and quinine; and this sums up their medical treatment of a case of ague. Dr. MACLEAN in his article in Quain's dictionary of medicine, (to put it shortly) lays this down as the best classical treatment in malarial fevers, and it is time to insist on the judicious use of antipyretics as a step in advance, for although the majority of medical men use them, the fact has not been prominently brought before the profession for discussion and quasi-official sanction.

If this short paper should have contributed in any way to the solution of the questions at its commencement, it will not have been written in vain.

A MIRROR OF PRACTICE.

A CASE OF HYDATID MOLE.

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THE following interesting and typical case of hydatid mole was first seen by me on the 25th October 1893.

Mrs. L., *et. 21 years*, married 11 months, pregnant five months, a tall spare Eurasian girl, stated that four days previously after alighting from a high dog cart at 6 o'clock in the evening, she felt a peculiar stitch-like pain in the epigastrium, and that about 9 o'clock the same evening she noticed a red discharge from the vagina, the pain soon abated, but the discharge increased. Next day the flow was excessive and she had to change every hour. At 4 P.M. violent intermittent fever commenced, which the mother said were exactly like labor pains, and at 9 o'clock that evening she was delivered of a large mass of *hydatid mole* about the size of a cricket ball, but somewhat elongated, the whole looking exactly like a bunch of grapes. She was considerably relieved, but the discharge continued, and after about 12 hours' intermission the pains recommenced and there was profuse hemorrhage, to stop which I was sent for urgently. Arriving at 8-30 A.M. on the 27th, I found that the patient's temperature was 102° F., and every now and then she suffered from slight shivering. It was evident that a piece of the mole remained attached to the placenta, whilst that a certain amount of sepsis poisoning had taken place. On examination the vagina was found intensely hot and dry, and an offensive thick greenish-red liquid was oozing from the mouth of the womb; the os scarcely admitted the tip of the index finger. It was determined to dilate the os at once, which was done with two sponge tents inserted under chloroform at 9 A.M. and 1 P.M. respectively. At 4 P.M. the second tent was removed, and as the patient had taken several doses of hydrate of chloral, the os was now soft and dilatable and soon admitted the largest-sized Hegar's dilator.

Chloroform was again administered, and the os being dilated as much as possible, admitted three fingers, with which the interior of the uterus was cleared of its contents. Finally, it was scraped out with a curette and washed with a 1 in 2,000 peroxide of mercury lotion. The patient's temperature went down to normal by 11 P.M., she slept well that night, all bleeding ceased, and the next day the normal lochia re-appeared, and the patient made an excellent recovery, becoming once more pregnant. I learn, four months subsequently.

This *hydatid mole* formed a most elegant preparation, and is now in the museum of the Hyderabad Medical School.

The case was reported, and the preparation exhibited at one of the meetings of the Secunderabad branch of the British Medical Association, where it was much admired as a typical specimen of this kind of abnormal gestation. Indeed taken together with the clinical history of the case, it is perhaps unique.

The question of the origin of *hydatid moles* has formed the subject of a great deal of controversy, and it cannot be stated that we are even as yet thoroughly acquainted with its pathological relations. Most authorities admit that it has some connection with a defectively-developed or blighted ovum. Accepting this as the origin of the moles generally, we know that there are three forms in which the blighted ovum may appear.

The *first* is that in which the decidua have undergone enormous thickening, forming a thick carneous or fleshy lump, the ovum being altogether insignificant, in consequence of its meagre development, forming the so-called *fleshy mole*:—the *second*, the so-called *apoplexy of the ovum*, in which extravasation occurs between the layers of the decidua and into the placental cells; whilst the *third*, the *hydatidiform mole*, the one under consideration, is said to arise from a disease of the chorionic villi, which develop into large vesicular structures, forming the grape-like bodies attached to the rest of the imperfectly-developed placenta.

These may occur from the death of the embryo early in fetal life, or they may themselves give rise to that occurrence. When the former is the case, the diseased state of the placenta may give rise to a rapid development of the contents of the uterus, so that the *tumor uteri* exceeds in dimensions that of the corresponding period of gestation. The *hydatid mole* was at one time considered to be an enormous dilatation of the cells of the chorionic villi, but this view was dispelled by Dr. GRANT HENRY, and it is now generally admitted that the villi themselves enlarge. Each cell contains a quantity of simple serous fluid.

The patient, after recovering, was in great dread that it would return after each conception, but we can find no evidence to show that such is likely to be the case.

The fact that few practitioners see a case, and that it is seldom that even accoucheurs see more than one in a life time, is sufficient to indicate its rarity and the interest attaching to the histories of recorded cases.

Case.—The above case was written about six months ago, and yesterday I received a note requesting me to give a brief account of the history of the patient's last parturition, as the patient was again under treatment for another malady. Further, two months ago, I learnt by accident

that the husband was being treated for tertiary syphilis, and that he had suffered from secondary syphilis before he was married, a similar relation has been observed in cases of hydatid mole recorded at different times. It may be remarked that at the time of the treatment of my patient, neither husband nor wife presented any signs of specific disease, and inquiries specially directed to ascertain any connection of this kind proved negative. We have here another instance in which the statements of patients and relatives should always be weighed before final acceptance, and in cases involving the utterance of a prognosis.

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SUPPURATING OVARIAN CYST: INCISION: DRAINAGE: RECOVERY.

BY SURGEON-LIEUTENANT C. C. S. BARRY, I. M. S.
Charitable Dispensary, Dinapore.

ON 1st May 1894, I was asked by the Hospital Assistant of the Civil Dispensary, Dinapore, of which I was then in charge, to see his daughter, aged about 30, who he said was very ill and her abdomen much distended. I found the patient, who was living with the Hospital Assistant in his house in the dispensary compound, exceedingly ill. She was lying on her back with both knees drawn up and her face was sunken and had an anxious appearance. The temperature was 104.2; the breathing quick and shallow, and the pulse rapid and feeble; the tongue was dry and dirty, and the bowels constipated. The abdomen was distended. On examination a tumour could, with some difficulty owing to the rigidity of the abdominal walls, be made out extending upwards from the pelvis to about an inch above the umbilicus. The tumour was apparently circumscribed and limited to the central portion of the abdomen, both flanks were resonant; the tumour itself being quite dull and apparently and immediately beneath the abdominal wall. Leave for a vaginal examination could not be obtained. The previous history, which was very uncertain, was that for some months the patient's abdomen had been noticed to be gradually getting larger. There had been no pain till about five days ago, when acute pain came on and had continued since with high fever. The patient had menstruated regularly. She had had two children. Having come to the conclusion the patient was suffering from a suppurating ovarian cyst, I with difficulty got leave to operate, but the patient refused to be moved from the house she was in, which was very dark and unsuited for operating in.

About two hours later, assisted by Surgeon-Captain McGLoughlin, A. M. S., I proceeded to operate. An incision about 4½ inches long was made through the abdominal walls, and the cyst was exposed, lying immediately below the walls of the abdomen. The cyst was quite free in front, but behind was closely adherent to the intestines; it could be traced downward into the pelvis towards the left ovary. As no trocar was available, sponges were packed inside the abdomen round the edges of the incision, and an opening was made in the cyst-wall, and some of its contents evacuated. A thick fluid containing pus and broken down blood clot smelling very fœtid, escaped. When a considerable quantity had thus been got rid of, the opening in the cyst was securely closed with Spencer-Wells clips, and the sponges having been removed, an attempt was

made to separate the cyst from its attachments to the intestine, however, very free oozing of blood was occasioned, and on this account, and owing to the fact that the patient was now very collapsed and the room so dark, that one could not make out the bleeding points, the attempt was given up. The abdomen was therefore well washed out with hot water and the cyst-wall sown to the lower two inches of the abdominal incision, and the rest of the abdominal incision sown up. The opening in the cyst was now enlarged, the contents freely evacuated, and the cyst-cavity washed out with hot water. A large drainage tube was inserted, and a dressing of lint soaked in carbolic acid with a pad of tow applied. No drainage tube was placed in the abdominal cavity; for (though the oozing of blood had been free) it was feared lest this tube might become infected from that draining the cyst-cavity.

At the conclusion of the operation the patient was much collapsed, but after the application of hot flannels to her head and body, she gradually got better. In the evening, about 6 hours after the operation, the temperature was 101°. There had been much discharge from the drainage tube, and the patient appeared decidedly better. The next morning the temperature was normal, profuse diarrhoea had taken place during the night, the bowels acting about nine times, and the patient, though very weak, was improved in condition. After this she continued to improve rapidly, and the temperature, though occasionally rising slightly, (to 99°) remained about normal. She rapidly gained strength, and the discharge, though foul-smelling for the first week, became sweet; it was however considerable in quantity. On 20th May, after having been absent from the station for four days, I found the hospital assistant had, in my absence, allowed the tube to come out, and had been unable to replace it. In consequence, a considerable quantity of pus had collected, and being unable to escape, had set up some constitutional disturbance, the patient's temperature being 104°, and there was considerable pain. Chloroform was again given, and the tube re-inserted and sown to the abdominal wall; the temperature immediately fell, and after this she made a complete though protracted recovery. The tube remained in till the discharge gradually ceased, which it did about five months after the operation, when the wound healed up firmly. The cavity of the cyst was syringed out daily with iodine solution, which was gradually increased in strength. I have not seen the patient since October last, but from a report I have received lately, ten months after the operation, I hear the woman is in excellent health, and gets about and does her household duties as well as she did before she first became ill. The wound remains firmly healed, and no tumour can be felt through the abdominal walls. During convalescence she suffered from much pain in the abdomen from time to time, necessitating the administration of opium; possibly the pain was due to the cyst-wall, as it contracted, dragging on the adhesions to the intestines; the bowels however, acted daily. She now menstruates regularly. I conclude that the violence of the inflammatory action which took place inside the cyst-cavity, assisted possibly by the strong iodine solution with which the cavity was afterwards daily syringed out, may have destroyed the secreting lining-membrane of the cyst and so enabled it to gradually shrink up.

TREATMENT OF COMPOUND FRACTURES BY CREOLIN IRRIGATIONS.

By A. MITRA, L.R.C.P., L.R.C.S. (Edin.)

Chief Medical Officer, Kashmir.

In 1891 I brought to the notice of the profession the successful results obtained by me in the treatment of compound fractures by creolin irrigations by publishing a few cases in the *Indian Medical Gazette*. From 1890 up to the middle of this year I have treated 53 cases of compound fractures of bones of the extremities, in 7 of which circumstances called for amputation, and 46 were treated by irrigation. The result in all of these cases, except two, was very satisfactory. In one only, subsequent amputation was necessary. In two cases there was necrosis, and both of them, after the removal of the sequestra, made excellent recovery. The cases were thus treated:—

If there was any protrusion of fragments, reduction was carefully done, enlarging the wound, if necessary, at the point of greatest resistance. Any portion, which offered hindrance to reduction, was sawn off. The wound was then thoroughly cleansed and washed with 1 in 20 carbolic lotion by means of a gum-elastic catheter fitted to an irrigator. A strip of oiled silk protective, soaked in carbolic lotion, was placed over the wound. The limb was placed in a suitable fixing apparatus and bandaged, leaving bare about 2 inches above and below the wound. The ends of the bones were brought in apposition as much as possible, but no actual union was made by sutures. A mackintosh sheet was slipped below the limb. Several layers of gauze wrung out of carbolic lotion were placed on the wound. A Lister's irrigator filled with strong creolin lotion (1 in 100) was then so arranged as to dribble continuously from a height of about 8 inches. I have tried carbolic acid and also izar, but with creolin the result was better. In cases of compound fractures, where soft parts are completely torn, or when there is extensive laceration, or where main vessels and nerves are severed, or when deep hemorrhage is profuse, or when there are other unfavorable conditions clearly indicating that the fate of the limb is sealed, there is certainly no option left but to amputate, but in cases in which circumstances do not call for immediate amputation, I recommend creolin irrigation as a very effective measure. The result of this treatment has been to me so very encouraging that I make bold to say that the rules for operative measures in compound fractures have now to be recast.

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CASES OF SUSPECTED POISONING IN CALCUTTA.

By CHUNI LAL BOSE, M.B., F.C.S.,

Chemical Examiner to the Government of Bengal.

CASE I.—Saroda Debi, Hindu female, of 8, Karbala Tank Lane.

History as furnished by the Police.—The woman was subject to fits. Her husband was an opium-eater and used to keep the drug in one of the pockets of his coat. The deceased was alleged to have stolen the opium and taken it. The husband gave her sulphate of copper as an emetic, but it did not produce vomiting. She suddenly became unconscious and died.

Chemical analysis.—Traces of sulphate of copper detected in the viscera; no other poison detected.

Opinion of the Police Surgeon (who made the post-mortem examination) as to the cause of death.—Death from natural causes.

Verdict of the Jury.—Death from natural causes.

CASE II.—Baddhanath Rakhit, Hindu male of 47, Durj-parah Street.

History as furnished by the Police.—The deceased was a moody. He was picking carlamoms among which he found a white lump which he mistook for chalk, and swallowed it. Vomiting and purging followed. He was removed to the Medical College Hospital, where his stomach was washed out. After 4 days he was discharged apparently cured, but died at home shortly after. His body was taken to the burning ghāt for cremation, which was disallowed by the police, and removed to the morgue for post-mortem examination.

Chemical analysis.—Arsenic detected in the viscera and the washings of the stomach.

Opinion of the Police Surgeon.—Death from arsenical poisoning.

Verdict of the Jury.—Arsenical poisoning self-administered.

CASE III.—W. G. Wagner, Eurasian male, of 6, Carey's Church Lane.

History as furnished by the Police and brought out in evidence.—The man was a plumber. He married a convert woman who was detected carrying on intrigues with an East Indian named Joe Cray and reprimanded by the husband. One day Cray brought some sweatmeat to the house which Mrs. Wagner gave her husband to eat, and which made him sick. A medical man was sent for, who treated the case as one of cholera, but finding that the patient was being neglected, recommended his removal to the Medical College Hospital, where he died within three hours. Death was certified to have resulted from cholera, and the deceased was duly buried. Subsequently the police, on certain information, had the body exhumed and examined. Mrs. Wagner stated also that she had given her husband a pill from a kabiraj to "cool his temper."

Opinion of the Police Surgeon.—Irritant and corrosive poisoning.

Chemical analysis.—Arsenic detected in the portions of the viscera.

Four doses of a mixture said to have been given to the patient, and a number of articles found in the house of the kabiraj were sent for chemical analysis.

The mixture contained extremely minute traces of arsenic. The dose prescribed was $\frac{1}{2}$ m. of liq. arsenicalis; consequently there was only one drop of liq. arsenicalis in the four doses of the mixture sent for examination.

No poison was detected in the stock of medicines found in the house of the kabiraj.

Verdict of the Jury.—Death from arsenical poisoning. Poison was procured by Joe Cray and administered to the deceased by his wife.

Both the accused are being tried by the Police Magistrate.

CASE IV.—Shib Chunder Chakrabarty, Hindu male, of 10 Ramkanta Bose's Lane.

History furnished by the Police.—The man was a priest and addicted to drinking. On the 3rd February at 8 P.M. he went out, and on the 4th, returned home at 9 A.M. quite drunk. He went out again at 11 A.M., but came back at 3 P.M. worse than before. He lay down, but shortly after was found groaning and unconscious. A medical man was called, but the man died the same night.

Chemical analysis.—Neither alcohol nor any other poison detected in the viscera.



*Yours Sincerely,
W. A. Rice.*

Opinion of the Police Surgeon.—Death from alcoholic poisoning.

Verdict of the Jury.—Death from alcoholic poisoning.

CASE V.—Bansari Kumari Das, Hindu female, of 5/1, Raja Rasthrib's Street.

History as furnished by the Police.—Had been suffering from chronic diarrhoea for 6 months previous to her death, and was in the habit of taking small quantities of opium. Her bowels getting more loose, she took a larger quantity on the day of her death. She was removed to the Mayo Hospital, where she died.

Opinion of the Police Surgeon.—Death from opium poisoning. As several pieces of opium were found in the stomach, the viscera were not forwarded for chemical examination.

Verdict of the Jury.—Suicide by opium poisoning.

CASE VI.—Khero Das, Hindu female, of 29, Gopi Kristo Pal's Lane.

History as furnished by the Police.—Her only child was suffering long from a complicated disease, and the case was pronounced hopeless by the medical attendant. She was last seen warming some milk for her child at 5-30 P.M. At 8-30 P.M. she was found unconscious and died between 10 and 11 P.M. the same night. She was apparently in good health a few hours before her death.

Chemical analysis.—Opium detected in the viscera.

Opinion of the Police Surgeon.—Death by opium poisoning.

Verdict of the Jury.—Death by opium poisoning, but how administered, and by whom, not known.

CASE VII.—Netyl Lal Chatterjee, Hindu male, of 37, Kristo Singhee's Lane.

History as furnished by the Police.—The man was a clerk in Messrs. Hoare Miller and Co's. Office. On the 19th February, he returned from office at 5 P.M. and was seen by his son to swallow something from a measure glass; on being asked what it was, the deceased said it was *bhang*. At 11 P.M. he was found drowsy and groaning, and when asked, said that he had taken an excessive quantity of *bhang*. At 9 A.M. the following morning he was found quite unconscious. Medical aid was procured; strychnia was injected under the skin; the stomach washed-out and artificial respiration kept up for nearly two hours; the patient did not rally.

Chemical analysis.—Opium and minute traces of strychnia detected in the viscera and in the washings of the stomach.

Opinion of the Police Surgeon.—Death by opium poisoning.

Verdict of the Jury.—Suicide by opium.

AN EARLY OVARIOTOMIST.

COMMENTING on the labors of DR. ALEXANDER DUNLAP of Springfield, O., who died in January last year at the age of 79, his collaborator, DR. J. C. BEVY, says that DR. DUNLAP was one of those strange characters, who not troubling himself to ascertain the actions of his predecessors or contemporaries and caring less for the approbation or reprobation by others less courageous than himself, studied more in the school of nature and practice than from books, and was continually striking out new paths for himself. Though his method of operation was primitive in the extreme, he performed his first ovariectomy in 1868, when the majority of the profession were bitterly opposed to ostatic operations, and while the *Medical-Chirurgical Review* of London, the then leading journal of the world, said of his operation, "We entirely disbelieve that it has ever been performed with success, nor do we think it ever will." DR. ROBERT LEE, the then leading obstetrician, openly stated that he was watching for a fatal case that he might cause the operator to be legally prosecuted. DR. DUNLAP continued his operations regardless of what the world had to say concerning him, and during his career of over fifty years performed 428 abdominal sections with eighty-three per cent. of recoveries.

OUR PICTURE GALLERY.

SURGEON MAJOR-GENERAL W. R. RICE,
M.D., Q.U.I., M.R.C.S., Eng., C.A.I.
Surgeon-General and Sanitary Commissioner with the Government of India.

THE subject of "Our Picture Gallery" sketch, WILLIAM ROGER RICE, was a distinguished scholar in the Faculty of Medicine in Queen's University, Ireland, and obtained the graduation gold medal and two exhibitions valued at £40. After graduating M.D., and obtaining the diploma of M.R.C.S., England, he entered the Medical Service of the Honorable East India Company, on the 20th November 1856, and was placed on the Bengal Establishment.

After the usual preliminary training at the Calcutta Medical Institutions, at that time authorised, he was appointed to the Bengal European Artillery at Cawnpore in March 1857.

In April of the same year DR. RICE was nominated to be a Civil Surgeon in Oudh, but did not join, for in May 1857 he was appointed Residency Surgeon of Indore.

On the 1st July of that year took part in the defence of the Residency at Indore under SIR HENRY M. DURAND when it was attacked by HOLKAR'S mutinous troops.

In September 1857, DR. RICE was placed in sole medical charge of the Nagpore Field Force, including a battery of European Artillery stationed in the Sitabuldees Fort and in February 1858 he accompanied a siege train en route to join Major-General Sir G. C. WHITLOCK'S Saugor Field Division.

In March 1858 DR. RICE was appointed to the medical charge of the 3rd Bengal Irregular Cavalry, the remains of the 42nd and 52nd Bengal regiments of Native Infantry, the greater part of which regiments had previously mutinied, and also to the charge of the Civil District and new police levies (Nai-chi) 3,000 strong, of Saugor, at that time a district of the Saugor and Nerbudda territories under the Government of the North-Western Provinces.

In 1858 he held medical charge in addition, of a wing of the 50th Madras Native Infantry, of the base hospital of the 3rd Madras European Infantry, and later on, of the 31st Bengal Native Infantry, a full regiment.

In 1859 further duties were added and he was appointed to the charge of General WHITLOCK'S Field Medical Store Depot.

DR. RICE was Staff Surgeon of the Saugor District from July 1858 to January 1860, and in July 1859 he was appointed in addition Medical Storekeeper of the Saugor (provincial) Medical Depot.

In 1860 DR. RICE was appointed substantively, Civil Assistant Surgeon of Saugor, and in 1863 Medical Storekeeper in addition.

In 1865 he was transferred to the civil medical charge of Jubbulpore, a first class station in the Central Provinces and in 1868 he was promoted to the rank of Surgeon-Major, and in 1885 to that of Brigade-Surgeon.

In 1880 and again in 1887 DR. RICE was selected to officiate as Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, and in October of the latter year he was confirmed in that appointment.

In December 1887 he was promoted to the rank of Deputy Surgeon-General, and in 1890 he was appointed to the high office of Surgeon-General and Sanitary Commissioner with the Government of India, from which post he retired on the 29th March 1895, having completed a service of 38 years, 4 months and 9 days, 30 years of which have been spent in the plains of India.

During the above service he spent 15 months on furlough on medical certificate, in 1878-79.

DR. RICE received a Medal for the Indian Mutiny 1857-58, and in 1891 a Good Service Pension was awarded him; in 1872 he was granted an extension of service of 2 years 2 months and 28 days, and he was rewarded with the distinction of a Companionship of the Star of India.

Surgeon Major-General RICE will long be remembered as a true friend of the local profession, who will heartily join in wishing him many years of happiness and prosperity in his retirement.

THE INDIAN MEDICAL RECORD.

1st April, 1895.

PERSONAL HYGIENE AND THE COMMUNION CUP.

It is not, of course, to be expected that a hallowed practice of a Christian church will be easily relinquished, and it speaks well in favor of the growing faith, even of lay people, in preventive medicine, that the warnings of the medical press during the last few years against the dangers of the communion-cup of the Protestant church have resulted in some safe innovations in the system of the administration of the cup. It cannot be that enlightened ministers of the gospel in this advanced century, fail to be convinced of the great risks of the spread of infection and disease from the passing of a cup from lip to lip, but it is the want of courage to give effect to the force of this conviction that stands in the way of the adoption of safer and newer methods. Some two years ago, while discussing the subject of the risks of contagion at the Lord's supper, a very good and zealous minister met the objection in this wise:—"The path of duty is the path of safety." This was the stronghold of his security. In reply we condemned the spirit of charity being manifested so sparingly when one belittles the opinions and fears of others by his own supposed irrefragible reliance on God's power to protect us from physical harm and contamination, even though reason and science (God's gifts to guide us) indicate clearly the danger we are in. Should we thus spurn as it were the guiding lights that Providence has blest us with to discern and avoid harm? DR. ALBERT ASHMEAD, in a recent letter to the *Sun*, writes very much to the same effect: "Of course," he says, "no man who is not a complete survival of the middle ages can assert that, under these circumstances, a man (if he knew) should apply his lips to a probably dangerously contaminated cup trusting in the protection of the Lord, who has allowed hundreds, a hundred times, to perish in burning or earth-shaken churches, while they were in the very act of worshipping Him." Many of those, however, who profess to feel themselves safeguarded by their obedience to duty's call, and their adherence to the path of duty, manifest a lively horror of infection or contagion from those with whom that duty occasionally brings them into contact, as is evident from the following extract from the *Indian Witness*—the organ of non-conformist missions in India—in an issue of not very long ago:—"It would be a great accommodation to persons doing Christian work in the city, if doctors having charge of small-pox patients would have a notice put up. It is a great shock to find yourself unexpectedly in the room of a small-pox patient." If the path of duty be the path of safety, why need the Christian worker be shocked to find himself in the presence of a small-pox patient, and what need is there for medical warnings to him in such circumstances? And is there no cause to be shocked to know that when kneeling around the Lord's table, one is as likely as not, to have the germs of incurable and disgusting afflictions transferred to him or her as the cup is handed round? Small-pox

is a possible disease, but with the cup at the Lord's supper, the risks with their consequences are more certain and terrible. It is a growing faith of the medical profession that the consequences of venereal disease are irremediable. In reference to all other dangerous and communicable diseases, the clergy, and the intelligent portion of the public in general, shew a sensible regard to medical admonition respecting their own safety and that of their brethren; and yet they would ignore professional dictum and advice in the matter of an easily communicable virus, the constitutional effects of which are direful and, what is more, irremediable.

If you would protect the Christian worker in his visits to the sick by medical warnings, why not protect the unsuspecting communicant by some measure which common sense, decency, and sanitation demand?

Apropos of the foregoing remarks are the following incidents related by DR. A. S. ASHMEAD in the *Sun*:—

"The last time I knelt at the communion altar of the Episcopal Church, there knelt at one side of me a patient whom I knew, (as I was treating him at the time), to be a syphilitic; his mouth had mucous patches, which make the disease specially contagious. This person took the cup before it came to me. Of course, I let it pass."

"At another time, the person next to me, but following me in the use of the cup, was also a patient of mine, in an advanced stage of tuberculosis. The mouth of this person was in a condition dangerous to his neighbour."

DR. CHARLES FORBES of Rochester, N. Y., has found in the dregs of a common communion-cup, epithelial cells, bacillar spores and various bacteria, and mucus; while examinations conducted by Drs. HOWARD ANDERS and C. FURNISH, of the dregs of an ordinary communion chalice, revealed tubercle bacilli, pus cells, and abundance of pavement epithelium. Disease-propagating circumstances of the foregoing kind may easily be added to and multiplied, but we think they are sufficient to make any one admit the loathsomeness of the prevalent mode of communion-giving in Protestant churches. It seems very much indeed like tempting Providence in thus persistently exposing thousands and hundreds of thousands, Sunday after Sunday, to direful risks.

Several churches in America are reported to have adopted the more sensible and hygienic practice of providing each communicant with a separate cup; and although on the score of inconvenience and in other respects, this principle may not commend itself to some, or may not be capable of universal adoption, we certainly view the departure from long-established custom with great satisfaction; for the greatest obstacle in the way of effecting a reformation in the matter of administration of the Lord's Supper, is not in any unwillingness to accept a hygienic recommendation, but the desire to adhere to old-standing practices. Writing a few years ago on the matter now under consideration, we suggested that the rim of the cup should be wiped after it has been removed from the lips of a communicant and before it is passed to another; but as more recent observations have disclosed the fact that there lurks serious danger not only in the unwiped rim of the chalice, but also in the wine itself after a few have partaken of it, the single communion cup passed from lip to lip is a source of danger

preceding. Of the total, 10,112 were from suicide; 55,813 were accidental and homicidal; and 23,773 were caused by snake-bites and by wild beasts.

There were 1,361 institutions affording *charitable medical relief* in the different provinces at a cost of Rs. 42,69,861.

The year 1893 was the most disastrous on record. It was attended by the severest epidemic of cholera ever known; and 40,000 or 45,000 pilgrims are reported to have succumbed to the disease, while the smell of putrifying dead bodies is said to have been perceptible sixty miles away. It being the AKBA year, the number of pilgrims was exceptionally large; there was scarcity of food and water, and the season was unusually hot. The average number of pilgrims leaving Bombay was exceeded by about 8,000. India, as usual, is blamed for starting the outbreak; but, as the Sanitary Commissioner of Bombay remarks, there is no ground for this charge against India, as cholera was "at times severely epidemic in parts of the Red Sea Coast, and that some of the villages in the French, Italian and Somali settlements on the Red Sea had been almost depopulated by cholera the previous year."

During the year 1893, investigations were carried on in the laboratory of the Sanitary Commissioner with the Government of India, to test the efficacy of alleged *snake-poison antidotes*, and also on the effects of the habitual use of hemp drugs. The experiments with snake-venom were carried out after the hypodermic administration of minimal lethal doses of the poison. The result of these experiments may be summarised as follows:—Nitrate of strychnine has no effect whatever in preventing the toxic effects of the poison or in preventing death after even minimal lethal doses of the poison have entered the system. Cures reported to have followed the strychnine treatment are therefore accounted for as having occurred in cases in which even less than the minimal lethal dose entered the system.

Saturated solutions of periodate crystals in no way appreciably delayed or modified the development of the nominal toxic phenomena.

A one-per-cent. solution of gold chloride injected either along with minimal lethal doses of the snake-venom or even after the poison has entered the system renders the poison inert; but here the efficacy of gold chloride ceases, as no amount of it introduced when the minimal lethal dose is exceeded, prevents death. It is intended to experiment with solutions of the alkaline hypochlorites, and with the serum of animals rendered immune from the action of the venom as recommended by CALMETTE. Experiments with the poison of RUSSELL'S viper shewed that an essential difference exists between the actions of cobra and viper venoms.

The phenomena resulting from experiments with hemp drugs indicate that the habitual inhalation of *ganja* impairs appetite but reduces *hemorrhages*, so that the habit may be beneficial to those subjected to habitual exertion while unable at the same time to obtain a proper diet.

INDIA'S MEDICAL GRIEVANCES TO BE PRESENTED BEFORE THE BRITISH PARLIAMENT.

THE anomaly of governing a country that is growing under the cruel and crushing weight of financial burdens, verging on the brink of bankruptcy; that highly paid imported labor, while efficient *European* *doctors* *offer* *hand* on every hand, is tantamount to a political crime of the first magnitude. In the medical administration of India, this anomaly stands out in gigantic proportions. We have the European medical services kept at a high numerical standard at enormous cost, whereas military titled officers paid enormous salaries to fill civil appointments and who employ their superabundant spare time in competing on disastrous terms with private practitioners, we have the legitimate and natural aspirations of the people of the soil strangled and smothered and effaced by the perpetual evidence that only Europeans educated in England and employed to serve the State, can ever rise to positions of trust and usefulness, that no man educated in India can ever hope to reach the goal of his ambition and become a leader in his profession by holding a surgeoncy in a hospital or a professorship in a medical school, that even the sacred testimony of independent medical practitioners in India is worthless in the eyes of the State, unless it is supported by the corroboration of some state-paid medical officer.

Under all these impediments and obstacles to her advancement, the local profession has suffered only too long and too patiently, and the time has now come, when a well-sustained and powerfully supported and unanimous representation must be made to the British Parliament. Our voice has been raised almost in vain in endeavouring to obtain the ear of the Indian Government to bestow some little attention to the grievances of the local profession. It is vain and foolish to push aside the consideration of the petitions of a long-suffering profession groaning under a deep sense of its oppression under a galling yoke, by such pleas as "financial depression" and "political complications on the frontier." These excuses do not have a feather's weight when the Government of India finds itself memorialised by the European services of India for exchange compensation, or for an enhancement of the travelling and other allowances of the effeminate officials who shirk their duties in the heat of the plains and flee to the cool retreats of the Himalayan heights for their ceaseless whirl of gaiety and frivolity. No! yet such will continue the reckless and sinful misgovernment of India till the voice of the British Parliament is heard in denouncement of these wrongs, and its hand is stretched out to break the shackles of the oppressed and down-trodden and to set them free. The time has come to reiterate, and India is ready with her prayer to the British House of Commons. The great memorial that the local medical profession will lay at the feet of the real rulers of India—the Commons of the United Kingdom of Great Britain and Ireland—is now ready. This important document, which is to be the *Memorial of the Indian Medical Association*, comes before the Council of the Indian Medical Association immediately, and will be placed in the hands of the people of India in a few days for their approval. More than 1,000,000 signatures for India to the British Parliament has been chosen. It is too premature perhaps

preceding. Of the total, 10,112 were from suicide; 35,618 were accidental and homicidal; and 23,773 were caused by snake-bites and by wild beasts.

There were 1,361 institutions affording charitable medical relief in the different provinces at a cost of Rs. 42,69,881.

The year of 1893 was the most disastrous on record. It was attended by the severest epidemic of cholera ever known; and 40,000 or 45,000 pilgrims are reported to have succumbed to the disease, while the smell of putrifying dead bodies is said to have been perceptible sixty miles away. It being the AKBAR year, the number of pilgrims was exceptionally large; there was scarcity of food and water, and the season was unusually hot. The average number of pilgrims leaving Bombay was exceeded by about 8,000. India, as usual, is blamed for starting the outbreak; but, as the Sanitary Commissioner of Bombay remarks, there is no ground for this charge against India, as cholera was "at times severely epidemic in parts of the Red Sea Coast, and that some of the villages in the French, Italian and Somali settlements on the Red Sea had been almost depopulated by cholera the previous year."

During the year 1893, investigations were carried on in the laboratory of the Sanitary Commissioner with the Government of India, to test the efficacy of alleged snake-poison antidotes, and also on the effects of the habitual use of hemp drugs. The experiments with snake-venom were carried out after the hypodermic administration of minimal lethal doses of the poison. The result of these experiments may be summarised as follows:—Nitrate of strychnine has no effect whatever in preventing the toxic effects of the poison or in preventing death after even minimal lethal doses of the poison have entered the system. Cures reported to have followed the strychnine treatment are therefore accounted for as having occurred in cases in which even less than the minimal lethal dose entered the system.

Saturated solutions of periodate crystals in no way appreciably delayed or modified the development of the nominal toxic phenomena.

A one-per-cent. solution of gold chloride injected either along with minimal lethal doses of the snake-venom or even after the poison has entered the system renders the poison inert; but here the efficacy of gold chloride ceases, as no amount of it introduced when the minimal lethal dose is exceeded, prevents death. It is intended to experiment with solutions of the alkaline hypochlorites, and with the serum of animals rendered immune from the action of the venom as recommended by CALMETTE. Experiments with the poison of RUSSELL'S viper shewed that an essential difference exists between the actions of cobra and viper venoms.

The phenomena resulting from experiments with hemp drugs indicate that the habitual inhalation of *ganja* impairs appetite but reduces tissue waste, so that the habit may be beneficial to those subjected to habitual exertion while unable at the same time to obtain a proper diet.

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yet, as we all stand firmly on a reputation that is based on his genius, energy, enthusiasm, patriotism, public confidence, and a perfect knowledge of the great cause he gave birth to, we expect. The declaration that such an energy has been found, ready and willing and efficient, and that all the needed funds are now at his command, will send a thrill of jubilation and encouragement through every medical heart in India. To us it seems that the early gleams of the sunshine of the great day of medical emancipation are plainly visible in the horizon, and that the shouts of victory for India are being heard along the land.

Let us gird up our loins and stand shoulder to shoulder in the conflict. Let there be no dissensions nor cliques. Let there be no traitors among us seeking to sell our noble heritage for a pultry mess of official pottage. Let us stand together boldly, conscious of our united strength, and of the justice and righteousness of our cause, fully confident that as a profession we have an inalienable right to earn our bread and to exercise our calling ON EQUAL TERMS, without fear or favor, with every imported Britisher who ventures to earn his fortune in India under the fostering care and tender regard of the Indian Government. Let all be ready at the word of command to support the public meetings that will soon be held all over India for the acceptance of the memorial to Parliament, and let every member of our profession take part in such meetings and demonstrate his sympathy by his presence.

In conclusion, we seriously commend the articles in our correspondence columns to our readers. DR. HART's utterances therein are encouraging, while the able handling of his subject by DR. BAHADHURJI will afford much pleasure and inspire enthusiasm, and as will be seen in the "official" pronouncement, we are not altogether without friends among honest officials in our profession; men who will not and cannot accept the CREDO of the official bureaucracy of this land, that "INDIA MUST BE GOVERNED BY OFFICIALS FOR OFFICIALS."

COMMENTS AND NEWS.

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN.

IN the discussion on the treatment of diphtheria by antitoxin raised at the Clinical Society of London by DR. WASSERHOVEN, GOODALL and CARD, it was interesting to note that, among minor differences of opinion, there was general agreement that not only statistics but clinical experience give no undoubted evidence as to the value of the antitoxin serum as a therapeutic agent. Statistically, DR. GOODALL has been able, in a striking manner, to bring down his case-mortality to a lower point than has ever previously been reached in the history of the hospital to which he is attached, whilst others reported similarly.

Erythematous rashes and pains in the joints.—These occurred in 20 per cent. of DR. GOODALL's cases, but they are to be regarded as of no great moment. They are only temporary, and occur most frequently in those cases where large quantities of comparatively inactive serum are given, disappearing in proportion as smaller quantities of more active serum are used.

The desirability of obtaining the antitoxin concentrated and apart from its serum was insisted on, but DR. BRIS WOODHEAD pointed out the extreme difficulty in being able to

separate such a stable and probably physically unstable substance from the "normal" fluid in which it is held in the blood.

Another point raised in discussion, which however was not in agreement with the observations of ROTZ, MARTIN and CHAILLON, was that the most fatal cases were those in which almost pure cultures of the diphtheria bacillus were obtained. It is interesting to note that this has not been the experience of all observers in England either. It is a point that can only be determined after much careful and accurate study of the disease in all its various aspects.

Tetanus and diphtheria.—The different results obtained in the treatment of each of these diseases by the antitoxic serum are exceedingly suggestive. The facts observed and the opinions now held are that the specific effects of the antitoxin are much more definite in the early than the late stage of diphtheria. The suggested explanation for the reason of this, given by DR. WOODHEAD, is that the difference between the two diseases appears to consist in the fact that the primary local lesion of diphtheria is recognisable at an early date, before the general (constitutional) toxæmia has far developed.

In tetanus, on the other hand, before it can be recognised as a disease, the conditional or general condition which follows the local injury and inoculation has developed.

The secondary symptoms of diphtheria correspond really to what we are accustomed to look upon as the real disease in tetanus. It is during this stage of the disease that comparatively little benefit can be given to the patient by the antitoxic serum method. Yet even here, as in certain cases of tetanus, some good may be done by a careful and judicious use of the antitoxin.

EXAMINATIONS FOR THE TRIPLE SCOTCH DIPLOMAS.

THE following questions put at a recent final examination for the diplomas of L.R.C.P., L.R.C.S. Edinburgh, and L.F.S.S. Glasgow, will give our readers a fair idea of the thoroughly practical nature of these qualifications:—

Medicine.—1. What are the two varieties of angina pectoris? Mention the forms of heart disease in which angina pectoris is most common, and give a full description of a paroxysm. 2. What are the causes, symptoms, physical signs, and consequences of spasmodic asthma? Describe an attack. 3. Give the causes, symptoms, and course of pseudo-hypertrophic paralysis. 4. Give the causes, symptoms, and course of diphtheria. In what various ways may it prove fatal?

Surgery.—1. Mention the varieties of tumour of the thyroid. Give the diagnosis and treatment of cystic goitre. 2. Describe the varieties of nevus, and give the treatment which you consider to be most appropriate to each. 3. Name the various dislocations of the shoulder joint. Give the symptoms of the most common form, and describe the method you would employ for its reduction. 4. Give the varieties of whitlow, their pathology and treatment.

Surgical Anatomy.—1. Name the bones of the tarsus in order. Mention all the structures cut through in an operation for the removal of the os calcis. 2. Give the course and relations of the external iliac artery.

Therapeutics.—1. Describe how you would treat a patient threatened with cardiac asystole, as shown by extreme cyanic dyspnoea, feeble and irregular pulse, etc. 2. Give the appropriate treatment—(1) for the night sweats; and (2) for the diarrhoea or advanced phthisis. 3. How would you treat a case of acute catarrh of the stomach produced by alcoholism?

Prescriptions.—Prescribe a mixture containing digitalis and squill for a case of mitral disease of the heart with bronchitis.

Midwifery and Gynaecology.—1. Mention the principal causes of abortion, and describe the treatment of a case of threatened abortion at the third month. 2. State the diagnosis and treatment of presentation of the shoulder. 3. Describe the mechanism of spontaneous evolution. 4. Name the principal displacements to which the uterus is liable. Give the symptoms and treatment in each displacement.

Medical Jurisprudence and Hygiene.—1. Mention the circumstances which, in a dead body, modify (a) Cooling, (b) Rigor Mortis, (c) Putrefaction. 2. Distinguish between an anti-mortem and a post-mortem burn? What are the causes of death after a severe burn? 3. Describe the symptoms, treatment, and post-mortem appearances in carbolic acid poisoning. Give two tests for the detection of the acid. 4. What is meant by "Death rate," and how is it stated? Mention some of the causes which tend to increase the mortality in unhealthy districts.

ADVERTISING PURE AND SIMPLE AND ADVERTISING AS A FINE ART.

ADVERTISING is strongly condemned and rightly so. In Great Britain a doctor who advertises is held up to public censure and often punished. In England hospital medical officers are forbidden to affix their names to any notifications of the appointments of the hospital staff. This too is fair to juniors and struggling practitioners outside the pale of hospital surgeo-nics and physicianships.

Speaking of such medical men advertising themselves through secular channels, the *New York Medical Record* says: "The old way is often criticised, and is not perfect. The man must become known through his work. The profession is not so dull but that it can recognise merit, and it estimates a man's abilities fairly well by his writings and by contact with him in scientific and other meetings. The recognition thus gained comes slowly, but special skill also is acquired slowly, and matters adjust themselves with a good degree of equity in the end."

In India things are very different. Government doctors are all fully advertised by the state in its *Gazettes* and by the lay press which freely copies the *Gazettes*. The hardship of this form of fine art advertising comes in when it is remembered that Government doctors—with few exceptions—compete in general practice with private physicians. Referring to the high salutin of the *New York Medical Record*, the *American Lancet* says:—"This is sound in theory, and we wish it were followed by the leaders in the medical profession. If it were, it would be less difficult for the rank and file to observe the lines of equity. Personally we believe the doctrine certain to lead to the most successful medical career; but here again the flash-light advertisers make such a glare that large numbers are dazzled by the rapid attainment of large business, and decide to "flash" themselves."

Perhaps our so-called "professors" who compete unmercifully with struggling practitioners, in spite of their huge Government salaries and their onerous duties with hospital patients and "original research" and "teaching," will see something in these remarks to touch up their conscience. But we have been hammering so long at this "game of grab" that we almost begin to believe that conscience is dead to the voice of reproof. Yet for the public good we mean to hammer on at these over-worked, over-paid and over-private-practised military-civil surgeons till a change comes, for come it must.

MEDICAL CHANGES BY THE NEW ARMY REORGANISATION.

The distribution of Principal Medical Officers of commands and districts between the Army Medical Staff and the Indian Medical Service is as follows:—

To each of the four commands, a Principal Medical Officer will be appointed; two will be taken from the Army Medical Staff and two from the Indian Medical Service. Officers of either service will be eligible for any command; but either the Bengal or the Punjab command, a Principal Medical Officer belonging to the Indian Medical Service will ordinarily be nominated.

Personal Assistant to the Principal Medical Officer, Her Majesty's Forces, { If a Surgeon-Captain of the Army Medical Staff Rs. 600.
If a Surgeon-Captain of the Indian Medical Service Rs. 600.

The districts of medical superintendence of Surgeon-Colonels will be distributed as follows:—

PUNJAB COMMAND. Medical Staff.

| | | |
|--------------|-----|----------------|
| Rawal Pindee | ... | Head-Quarters. |
| Birhind | ... | Rawal Pindee. |
| | ... | Umballa. |

Indian Medical Service.

| | | |
|-----------------------|-----|-------------|
| Lahore | ... | Meean Meer. |
| Punjab Frontier Force | ... | Abbottabad. |

BENGAL COMMAND.

Army Medical Staff.

| | | |
|------------------------|-----|------------|
| Allahabad and Nerbudda | ... | Allahabad. |
| Meerut and Bundelkhand | ... | Meerut. |
| Outh and Rohilkhand | ... | Lucknow. |

Indian Medical Service.

| | | |
|------------|-----|-----------|
| Assam | ... | Shillong. |
| Presidency | ... | Calcutta. |

MADRAS COMMAND.

Army Medical Staff.

| | | |
|----------------------------------|-----|---------------|
| Secunderabad and Belgaum | ... | Secunderabad. |
| Mandalay with Chin Hills Command | ... | Mandalay. |

Indian Medical Service.

| | | |
|------------------------|-----|------------|
| Bangalore and Southern | ... | Bangalore. |
| Rangoon | ... | Rangoon. |
| Madras | ... | Madras. |

BOMBAY COMMAND.

Army Medical Staff.

| | | |
|----------------|-----|---------|
| Poona | ... | Poona. |
| Mhow and Deesa | ... | Mhow. |
| Quetta | ... | Quetta. |

Indian Medical Service.

| | | |
|-----------------|-----|------------|
| Bombay and Aden | ... | Bombay. |
| Sind | ... | Kurrachee. |
| Nagpore | ... | Kamti. |

The administrative medical charge of the Peshawar District will be held alternately by a Brigade-Surgeon Lieutenant Colonel of the Army Medical Staff and of the Indian Medical Service.

THE PHYSIOLOGY OF THE FEE.

"How should the fee be paid?" is a very simple problem over which too much mystery is made and too much delicacy displayed by both receiver and donor. Some patients remember to forget the fee, others put it down on the physician's table and then pocket it on a moment of abstraction, some think it a crime for the physician to expect a fee, while others offer it shame-faciously or with trembling hand as if they were about to do something dreadful, and were afraid or ashamed to let the left hand know what the right was doing; and others tender the fee rolled up neatly in paper; but that this last has been taken advantage of by unscrupulous persons is within the experience of every doctor, and was amply proved at the decease of JESSIE DE LAMBERT (who was very careless about fees) when a number of packets (i.e., fees) supposed to contain rouleaux of gold coins were found to be gold

and which has many small business houses between. As it is difficult to understand why any kind of a necessary or should be considered a necessary business transaction between doctor and patient, the doctor has had a card posted up, in the waiting-room, stating the terms on which he might be consulted; but he took whatever was offered him, except when he thought it "too much." DEPUTYMAN used to ring his bell in a particular way to make his hall porter refresh the absent-mindedness of the departing guest. A man "in possession" used to act as Secretary for BROWN and collect the fees due him. Now as the young physician blushes when he gets a fee, while the old one blushes when he is done out of one, and as a snobbish objection has been raised that "it would be impossible to make a man a lord who had held out his hand for guineas," a contemporary suggests that matters would be simplified and nastiness obviated by the employment of a 'Secretary' corresponding to the barrister's clerk to collect their fees for them. We have tried this method for over ten years and find it most workable.

POISONOUS AND EDIBLE MUSHROOMS.

THERE are but a few kinds of poisonous fungi, yet every season a number of persons suffer to a greater or less extent owing to a failure to discriminate between edible and poisonous kinds of fungi. In most cases of poisoning it is impossible to ascertain positively what particular form of fungus has been eaten, but the species almost invariably proves to be *Amanita phalloides*, *A. pantherina* or *A. muscaria*, which grow in similar localities and often intermixed with the edible varieties from which they can be distinguished by the gills remaining permanently white and not touching the stem which is furnished near its top with a thin ring or fringe, and at the bottom is surrounded by a loose sheath or vulva. The lethal effects of the amanita appear in from 14 to 8 hours after eating the fungus, and are due to *Phalline*, which is a virulent blood poison that differs from other toxalbumins by not being neutralised by heat; but it may be antiloted by strychnine sulphate taken in coffee. The varieties that can be eaten with impunity and perfect safety are the *Agaricus aguratus*, *A. campestris*, *A. clerensis* and *Lepiota procera*. The *Helella crispata* and its varieties are excellent when cooked, but when eaten raw, give rise to poisonous symptoms created by the helvellic acid they contain, and which acid is decomposed by heat. The *Coprinus atramentarius* is considered a great delicacy, but if whisky be taken while or soon after eating it, its poisonous symptoms occur. The mycophagist should therefore bear in mind (1) to always properly cook the fungi he eats, (2) to be careful of the variety he makes a meal of, and (3) never to take strong alcoholic drinks with the meal or within four hours after eating fungi.

HOW TO GIVE PILLS TO CHILDREN.

THE plea of mixing-mixtures being open to the grave objection of the relucit often interfering with the action of the medicine, and though older children can be made to swallow nauseating drugs and gobble down pills with very little trouble, still small children cannot swallow pills without showing their up, and if they contain any ill-tasting drug, they are immediately spat out. Gelsemium is the sheet anchor in most fevers when given in combination with an acid, but it is so bitter that children will not take to it. To obviate this Dr. A. C. BORN has the solution made up with aromatic sulphuric acid in small pills, which he directs the mother to break up, and after mixing it with a little brown sugar to place it upon the child's tongue, and give some water to drink, after the pills are in the stomach. A piece of white chocolate may be given before and after the fragments of gelsemium. The sweet and moist way is a

mother's kiss is through her children, and as it is the mother who build up the greatest part of a doctor's practice at home, Dr. BORN thinks that these physicians, who apply themselves resolutely in agreeable, neat and simple form, will not only survive in the terrible struggle for existence, but also winning for Our Art the reverence and allegiance of every intelligent mother in the land, will receive honest medicine from the borders of quacks who beat her at every step, and in the course of a few years at most, the doctor who prescribes for children large quantities of nauseating stuffs that disorder the stomach and exhaust the family purse, will become obsolete.

WATER IN DIET AND THERAPEUTICS.

DR. B. C. LOVELAND mentions some instances where apparently serious disease was cured by the administration of a tonic and increasing the water consumed by the patient, as he notes that, besides relieving thirst, water is a simple fluid that, acting as a solvent for aliment, aids in the absorption of the food-material which it takes with it on its way to the blood, where it forms a medium for the solution and suspension of the various compounds needed for the nourishment of the tissues and helps the effete materials on their way to the excretory organs, and here again water re-exerts its solvent power in the removal of urea, kreatine, chlorides, phosphates, sulphates and some other materials that the blood has no use for and needs constant cleansing from. If the water becomes deficient, osmosis is impeded to a greater or less degree, the bowels suffer, the digestive fluids become too thick to do their work properly, and according to the natural laws of crystallisation, too great concentration (i.e., insufficient dilution) leads to the precipitation of soluble ingredients to form calculi of various sorts and deposits of a harmful nature in the tissues. Lack of water in the blood predisposes to arterial degeneration, uric acid diathesis and congestions, with their attendant evils, while the retention by concentration by the blood, of excrementitious material, converts the life-stream into a slow poison producing mental depression and other reflex symptoms of a grave nature, and as the great majority of diseases are really due to insufficiency of fluid in the body, the judicious use of water will change the character of the blood and restore the body to a healthy tone.

THE RISKS OF THE MEDICAL PRACTITIONER.

SAYS the *Lancet*:—"A story of the way in which the medical man is frequently victimised has lately been reported from Sheffield. An ingratiating visitor took up his quarters at a well-known hotel and inspired confidence by his demeanour and aspect. Having been seized with severe illness he was for a long time attended by two medical men, and a trained nurse was procured for him. The care and treatment bestowed were successful in restoring him to health; but he rewarded his benefactors by abruptly quitting the town without repaying any of the outlay incurred in his behalf. This exemplifies one of the difficult positions in which a practitioner may from time to time be placed. He cannot conscientiously disregard a summons to attend a stranger whose life may be at stake—the question of his remuneration must even be secondary; but our medical brethren will not wisely in not allowing their benevolence to outrun their prudence in the case of obliging patients." Doctors in Calcutta experience this kind of sharp practice very often from "theatricals" and hotel visitors. A good plan is to demand fees in advance, as lawyers do in all cases, from globe-trotting theatricals and their gnomes.

THE PAPAYA TREE.

THE fruit, juice and leaves of the papaya or pawpaw tree, common to most southern latitudes, exerts a solvent action on animal tissue, whether alive or dead, and have been exhibited

Mr. Rankin comments that the chemical test of the purity of water is cumbersome, costly, and of little use; whereas the bacteriological test is easy and accurate.

An excellent speaking for a natural Honorary Surgeon or Assistant Surgeon is said to exist at Pondicherry. There is now an English medical officer in the Colony.

Dr. Daniel Hack Tuke, M.D., F.R.C.P., the great London authority on psychology, died on the 5th March 1895, aged 68 years.

Sir William Roorell Mayors, Baronet, F.R.S., F.R.C.S., consulting surgeon to St. Bartholomew's Hospital, London, died on 4th March 1895, aged 69 years.

I. M. S. Congress wallahs are much offended at Mr. Ernest Hart's acting school master over them. They are abusing him in the *Englishman*.

Surgeon-Colonel James Cleghorn, M.D., is appointed to be Surgeon-Major-General, *vice* Surgeon-Major-General W. R. Rice, M.D., C.M.I.

We regret to hear that Surgeon-Colonel H. Harvey, D.S.O., lately appointed Principal Medical Officer, Punjab Army, is ordered home immediately owing to ill-health.

An epidemic of fever at Rangoon is attributed by Dr. Johnstone, of the General Hospital there, to the putrid water supplied by the Municipality.

We regret to hear that Surgeon Lieutenant-Colonel Wright, who won the D. S. O. in the Upper Burma Campaign, has been compelled to take sick leave home.

Miss Kate Bonnar has obtained a scholarship from the Naini Tal Diocesan High School granted by the Dufferin Fund, and has entered on her medical studies at Lahore.

Deputy Surgeon-General C. J. J. Jackson of Bengal (retired) died at Kise on the 16th January 1895, aged 64 years.

Surgeon-Major A. Milne, Calcutta Mint, is transferred to Bombay as Deputy Assay Master.

Medical leave has been stopped in view of the impending Chitral expedition.

Surgeon-Colonel G. C. Ross is appointed to be Inspector-General of Civil Hospitals, Bengal.

Dr. W. B. Palmer, the talented Editor of the *Medical Age*, died on the 4th January 1895.

The public dinner given to Surgeon Major-General Rice, was a great success. A large body of officials were present.

The man who is perfectly proportioned weighs exactly thirty and three-quarters pounds for every foot of his height.

Miss Alice Van Ingen, M.D., intends to practise in Hyderabad.

Assistant Surgeon C. A. Lafrance has been appointed Second Surgeon of Utica and for six months.

Malaria in an epidemic form is raging in Calcutta.

OUR LONDON LETTER.

(From our own Correspondent.)

For many days past, the intense cold has caused great privation among the poorer classes in London and elsewhere. Many nights and in the early morning Negretti and Zambra's thermometer has registered 10 degrees below zero, i.e., 42 degrees of frost, and this has occurred during many nights. Numberless accidents have happened owing to the glassy condition of the ice-bound roads, and many people have been unable to obtain water, except from plugs derived direct from the great water mains. Consequently but little water is available for flushing drains, and general sanitary condition is very bad; the consequence could readily be foreseen. Although there is decrease of diphtheria, there is a marked increase in the number of fever patients admitted to the hospitals of the Metropolitan Asylum's Board. Cases are recorded of poor creatures frozen to death while seeking for work, food, and shelter. Cabmen have been frozen on their boxes; and policemen, while on duty during the terrible nights of prolonged frost. Numberless cases of frost-bite are reported from different quarters. Suicides and murders have been frequent. One of the dailies has started a fund in order to provide one meal a day for thousands of poor people in the East End and other poverty-stricken localities. Another sign of the severity of the weather we have been enduring, is that flocks of sea-gulls have appeared on the Thames as high as Westminster Bridge. The thermometer now stands 17° F. below zero. The river Thames has been frozen over, and was crossed by a horseman at Kingston. The poverty and distress throughout the great metropolis are perfectly heart-rending. Thousands are out of work; many kinds of business are quite at a standstill. We have counted 13 deaths detailed in one evening paper from the intense frost.

A medical contemporary draws attention to the fact that many practitioners still practise the so-called "open" method of giving chloroform, with a large increase in fatality: recurring to Dr. SNOW's remarks of yore that the anæsthetic should be given in a very diluted form (i.e., with about 5 per cent. of atmospheric air). Dr. LAZARUS demonstrated this at the London Hospital in the course of the year. Still, the number of deaths attributed to this anæsthetic are a reproach to British therapeuticians. As to the treatment of collapse, the sooner the old-fashioned ether injections are discontinued, the better: much more scientific is the hypodermic injection of a tuboid of strychnine sulphate dissolved in a few drops of water and repeated if necessary, with artificial respiration combined.

The last development of Medical Aid Associations is that it is the custom for insurance societies to offer to give to those who insure their lives with them, the additional benefit of medical attendance gratuitously, the Company paying the doctor a yearly stipend. It really seems astonishing that medical men should have concurred with a growth in their midst.

Thyroid Gland Substance is also in vogue. In answer to a paper read by GRAY, M. GRASER stated he had treated three patients (cases) with this substance, and succeeded well in two of them. At the Augusta Hospital, Cologne,

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ESTABLISHED AND REGISTERED 1894.

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25 patients were treated; result, 22 of these stout individuals lost a satisfactory amount of superfluous adipose tissue.

We regret to record the sad demise of Mr. WHITEFIELD of Bristol, who, driven to desperation through being unable to meet his liabilities, took a dose of hydrocyanic acid. He leaves behind a widow with several young children in a state of deplorable destitution.

The report of Drs. G. SIMS WOODHEAD and E. C. WOOD, detailed in our renowned contemporary, *The British Medical Journal*, condemns filters as a whole, as being quite useless protectors against water-borne germs; excluding only three kinds which proved to have any effect in safeguarding against these ravages, viz.:—(1) The Pasteur-Chamberland Filter; (2) Berkefeld Filter Company, Limited; (3) the Aéri-filtre Maillie Porcelaine D'amianto Maison Maillie (Paris).

At a meeting of the Midland County's branch of the B. M. A., Mr. CHRISTOPHER MARTIN shewed a case of spurious hermaphroditism. A person aged 21, with external genitalia and characteristics of a woman, but the essential organs of a man, had been brought up as a woman and had earned his living as a nursemaid, kitchen-maid, and barnmaid. In February 1894 he had a painful swelling in left inguinal region. Mr. MARTIN cut down upon it and removed an undoubted testis. In October 1894 Mr. MARTIN again operated on a painful lump in the right groin, thus removing the other testicle. There was no trace of beard, whiskers, or moustache. Breasts were flat and poorly nourished; no hair on external genitals. There were labia majora and minora, a vestibule with meatus urinarius, small clitoris, vaginal ostium with hymen, vagina, a cul de sac 1½ inch long, with no trace of a uterus. When first testis was excised, hair began to grow on pubes, and he developed symptoms of hysteria; after the second testicle was ablated, breasts became enlarged and tender, at the same time he complained of "heats and flushes" common to the "climacteric."

Bradford Medico-Chirurgical Society.—Dr. CHAPMAN shewed a child suffering from sporadic cretinism, who was improving under the thyroid gland treatment. At a meeting of the *Sheffield Medico-Chirurgical Society*, Dr. BARNARD STEDMAN read a paper on "Rectal Etherisation," in the course of which he stated that he had administered ether per rectum in about 20 cases of operations about the mouth at the Sheffield Public Hospital, and that so far his results had been very satisfactory. His plan consisted in placing a vessel containing ether in water at a temperature of 120°F., and then conducting the vapour through India-rubber tubing into the rectum. There was little or no struggling during the administration. Its disadvantage was that it sometimes took half an hour to anaesthetise the patients. After this was done, the temperature could be reduced to 110°F. This practice was sufficient, when anaesthesia had been accomplished, to keep the patient under its influence. That also after-effects in his cases were slight. In half the cases no sickness; in 2 or 3 a little diarrhoea with mucous discharge; no pain in rectum complained of.

At a meeting of the *Leicester Medical Society*, Dr. MACKAY read case-notes of a patient afflicted with myxodema treated by thyroid gland, and practically cured. Dr. WILKIN BLAKE read notes of two cases of pericels

treated by thyroid gland; the first was cured; the second after shewing marked improvement, relapsed. Dr. KEAY treated two cases of insanity with the same drug, but his results were negative.

At Sutton Coldfield an obscure outbreak of disease was attributed to soup; 18 gallons of this were given away to poor people, and within 48 hours 100 or more of these folks were attacked with vomiting, purging and prostration. Samples of the food were analysed by Professor HALL, and no trace of any mineral poison was detected; saltpetre was suggested but vetoed by the analysts. There was in every case, swelling and pain in the abdomen. One patient has died; sewer gas has been suggested as the cause of the poisoning. There has been an attempt made lately by numerous medical men to establish the operation of castration as a cure for prostatic hypertrophy.

It is reported that Mr. JOHN OGHILY of Inchilewan (Forthlirre) who died early in the year, aged 100, though a qualified medical man, did not practice.

The *S. S. Heron*, on arriving at Gravesend, reported that an A.B., while the ship was at Massena, was attacked with cholera and died in 38 hours. The body was cremated on shore at Port Augusta.

The British Massage Association is now an established fact.

There has been a deal of discussion lately on hospital abuse. Here is just an anecdote that may prove interesting. A patient in the garb of the church applied for admission to one of the northern infirmaries, as he complained of a mysterious cutaneous eruption. The surgeon who saw him said that a man in his position should not apply to a hospital for relief. On his stating his inability to pay a doctor, he was admitted to the ward set apart for venereal diseases. The surgeon going round with his class entered this particular ward and approached the bed allotted to the clergyman, who, on observing the surgeons following, thereupon divined under the bed-sheets, completely enshrouding his countenance. The surgeon omitted for the time to examine him through courtesy, but shortly after ascertained, that among the body of students who attended him on his visitation, the cleric in question was startled to observe the countenances of two nephews, and further, he was discovered to be anything but the pauper he affected to be!

We hear that the organisation of the next International Medical Congress, which is to meet in Moscow in the year 1897, has already commenced, the Executive Committee having for their Chairman Dr. KLEIN, Professor of Morbid Anatomy in the University.

A prize was offered for essays on various points, chiefly connected with prevalence, etc., of leprosy about a year ago. Ten questions were propounded. The *Lancet* says that no fewer than ten essays have been sent in. The adjudicators have amongst them Sir J. FAYRE, Sir GREYS HUNTER, and Mr. JONATHAN HUTCHINSON, who state that all the essays shew great insight into the subjects discussed. It is expected that a decision will be shortly announced, and that the selected essays will be published if the funds permit.

Dr. BARKS (Leeds) reports a case of pernicious anaemia cured with marrow substance after iron had totally failed, and the amount of arsenic administered had produced

prophylaxis. Dr. Fabry reports a case of cholera treated successfully with red nervous tablets (B. W. & Co.)

A new medical journal has struggled into birth amongst us, entitled *Clinical Sketches*; its Editor is Norman SMITH, F.R.C.S., & Imperialis well, and is fortunate in securing among its contributors, Mr. J. B. BOTTEN.

Mr. James Macnair, M.B. (Northampton) records a case of traumatic arthritis treated with injections of tetanus antitoxin, the total amount injected being over 9 grammes, and the patient being cured by the treatment in 15 days.

J. LLOYD FIRTH, M.D., M.S., F.R.C.S., gives notes of a case of *tetanus neonatorum* (often seen in India) unsuccessfully treated with tetanus anti-toxin; his doses were too small, hence perhaps the untoward result of the treatment, although the malady is a rapidly fatal one as a rule. The smallest dose injected should be from 1 gramme upwards to 2 or 3 grammes. The treatment of diphtheria by anti-diphtheritic serum is still scoring numerous successes, although violently, and somewhat unscientifically opposed by some medical men.

We regret to record the death of JOHN WHITAKER HOLKE, F.R.S., F.R.C.S., late President of the Royal College of Surgeons, England, Senior Surgeon to the Middlesex Hospital, etc., and an active Fellow of the Geological Society. He was an old Cretan Surgeon, and also served in the West Indies. We note the fact that he always exhibited the greatest kindness towards his pupils, many of whom owe much of their success in life to his influence and teaching. The cause of his death was *post-influenza pneumonia*, at Old Burlington Street, London, on 26th February 1906. His death is deeply regretted by all who knew him. He took part in one of our latter-day discussions on the subject of "Yaws" (Framboesia) and was the author of well-known surgical works.

Current Medical Literature.

MEDICINE.

Prophylaxis of Malaria: the best forms of Quinine to administer.

THE Societe de Therapeutique recently appointed a committee (MM. Adrian, Barlet, Berlios, and Boymond) to report on the above question. The Commission concludes that the employment of solutions of salts of quinine should be reserved for active attacks of malaria. The best prophylactic salt of quinine to use is the basic hydrochlorate, it being the richest in alkaloid and sufficiently soluble. It has a less irritating action on the stomach than the sulphate. The hydrobromate should be used only in cases rebellious to the hydrochlorate. As to the pharmaceutical form in which the hydrochlorate should be administered, compressed preparations are recommended, and pills made up with a soluble excipient or *perles* provided with a gelatinous envelope are recommended. *Pills or perles* containing each fifteen centigrammes of the chlorhydrate and given one in the morning and one at night, or else, before meals, suffice to keep the system under the influence of quinine so as to ward off attacks of fever. In the course of the discussion following the reading of the report, it was suggested that the War Office should be urged to desist from its attempt to manufacture on a large scale compressed tablets of quinine for the use of the troops, being that the report was unfavorable to that method.

A severe case of Multiple Sclerosis.

IN a recent number of the *Neurologische Klinische Wochenschrift* there appeared an abstract of an interesting case gathered by Professor LEBERT in the *Städt. Klinik, Strassburg*. The patient was a woman twenty-seven years of age, who had been ill since the commencement of 1892. She came under observation in May 1893, and at that time was in a most helpless condition. She was unable to move her extremities, and could not raise herself or sit upright. Her memory was much impaired, and she was forgetful and emotional. The extensor groups of muscles were much wasted, the knee-jerk was absent, and conduction of painful impressions was delayed. The patient was much wasted. No disease came could be found to account for the condition, and Professor LEBERT regarded the case as probably one of rheumatic multiple neuritis. On account of the extremely severe character of the disease, the prognosis was somewhat doubtful, but energetic treatment by means of gymnastic exercises, electricity, and strychnia injections was in the course of ten months effective in completely restoring the patient to health and activity.—*Lancet*.

Treatment of Infantile Convulsions.

JULES SIMON, who agrees with most observers that these symptoms are due to digestive disturbances, directs his attention to the alimentary canal which he promptly clears by a warm clyster of oil or glycerine, a teaspoonful or two at a time, and if the stomach appears to contain undigested food, he orders an emetic. After the bowels have acted, he prevents recurrence of the convulsions. He employs rectal injections of chloral and milk, and the hourly internal exhibition of small doses of bromide of potassium. Cutaneous revulsives, such as hot baths, mustard baths and blisters to the nape of the neck he never uses, except in obstinate cases, as he prefers—if the bowels are late in acting—Chloroform to control the spasms. He urges the necessity for immediately searching for the cause of the convulsion, which may be due to cutaneous irritation, uremia, or reflex irritation from phimosia, hernia or foreign bodies in the ear, if constipation, indigestion or inflammatory disease of the bowels are absent, and such symptoms must, of course, be promptly attended to and relieved.

A new Sign of Diabetes and Albuminuria.

M. GAREL of Lyon claims to have discovered a hitherto unrecorded physical sign which is almost pathognomonic of either diabetes or albuminuria. He states that many patients complain of a slight irritation of the throat—some difficulty of deglutition, a sensation of swelling, and constipation of the faeces. The soft palate, the pillars, and the posterior wall of the pharynx are found to be red and swollen, and frequently covered with a more or less viscid layer of mucus. In the majority of such cases, examination of the urine reveals the presence of either glucose or albumen. Most of these patients present only quite insignificant general symptoms, so that M. GAREL's discovery, if it be confirmed, is of considerable value. Of twenty-one individuals affected with this particular form of pharyngitis, ten had diabetes and eleven albuminuria, and in three of the cases sugar and albumen alternated in the urine. I would, however, ask if it be not the wiser plan to analyse, as a matter of routine, the urine of every new patient, more especially when middle age has been reached? In my own practice I think it better to do so, and I have therefore taken a *Simms* pharyngeal speculum.

Chloroform Test for Urinary Diabetes.

YAMAGUCHI reports a case of diabetes in which the test for glucose failed, when applied to the specimen, but was struck down with accuracy and speed on the third day.

...the patient was found to be suffering from a severe attack of gonorrhoea, from which he was cured. He had a second day that had lasted five months, when he suddenly got an attack of left hemiplegia which, however, cleared up, but showing evidence of cardiac lesions or of arteriosclerosis, caused considerable awkwardness in the voluntary movements of the left hand, and the fact that vegetative is frequently a result of gonorrhoea, would suggest that these cerebral lesions have a close casual connection with that disease, and are not merely coincidences.

The forms of Diabetes.

DR. GEORGE HARLEY gives the following classification of diabetes:—

1. Hepatic diabetes—including the gouty variety.
2. Cerebral diabetes—including all cases of saccharine urine arising from nerve derangement.
3. Pancreatic diabetes—the most deadly form of the disease.
4. Hereditary diabetes—a form by no means uncommon, and one, too, where both brothers and sisters may labor under the disease without either their maternal or paternal parent having been affected by diabetes, though more distant members of the family may have suffered from it.
5. Food diabetes—including all forms of saccharine-urine arising from the ingestion of unwholesome substances.

In the matter of treatment, besides diet and opium or colicin, Dr. Harley recommends croton, chloral, strychnine, phosphoric acid for thirst, and an absolute prohibition of alcohol.—*Amer. Lancet.*

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SURGERY.

Castration in Hypertrophy of the Prostate Gland.

PROFESSOR WHITE was the first to suggest this operation for the relief of enlarged prostate. SIR HENRY THOMPSON has pointed out, after careful observation, that one man out of every 8 over 64 years of age has enlargement of the prostate; 1 out of every 7 presents some amount of obstruction; while one out of every 13 has sufficient enlargement to call for some form of treatment. The lives of such patients are usually threatened and undermined by retention, backward pressure of urine on the kidneys, and the frequent use of the catheter. Loss of sleep is thus entailed, also because of the incessant demand at night to void urine. The methods usually adopted therefore have been the various forms of prostaticotomy. The *extra-perineal* method is often attended with pain, failure and a high mortality. The *perineal* form is dangerous owing to the free hemorrhage that follows, and at best it is only a palliative method of treatment, doing good only temporarily, but entailing the use of a bougie, and confining the patient to bed for many weeks.

Combined supra-perineal and perineal prostatectomy enables the gland to be excised with greater freedom, but it is an operation of such gravity as to be more indicated in the very cases which are destined to benefit. In view of these facts it is not surprising that castration has been resorted to by surgeons as a palliative method of treating enlarged prostate. That was its indication at a period when the water was

right to become fossilized and as when the only means of relieving suffering for many months and years, as he related only by death. Unmistakable objections to that of securing permanent relief, without placing the life of the patient in danger, pale into insignificance.

There have been recorded from America, Norway, Sweden and England in all 18 cases of castration, all of which have been more or less successful, and there have been, of course, no deaths. The least favorable cases have obtained relief, certainly greater, than by any other method hitherto employed. The rapid shrinking of the enlarged gland and the simultaneous relief afforded the patient are "truly marvellous." Castration is not indicated in every case of hypertrophied prostate. Cases of prostatic abscess, prostatitis, trichitis of the prostate, and other forms of obstruction in its neighborhood must be clearly distinguished from enlarged prostate. The results have been so uniformly favorable, that castration may now be considered a *specific* for hypertrophy of the prostate.

Gun Shot Wound of the Spleen and Kidney: Abdominal Section: Haemorrhage by deep suture: Recovery.

DR. LOUIS M. TIFFANY, of Baltimore, in a paper given the following details concerning a gun-shot wound in a young Negro, aged 20. He was wounded at the distance of 35 feet by a small-calibre rifle from behind, he being erect. The wound was 3 inches below the spine; and beyond the urine being slightly albuminous, there was nothing else wrong. The patient was anaesthetised, the dorsal wound enlarged and examined. The upper portion of the left kidney was found perforated and dark blood was issuing. On examining the abdomen externally, nothing was elicited, not even pain. DR. TIFFANY, however, opened it freely, suspecting further internal mischief. The peritoneal cavity contained some blood; the intestines were not wounded, but the spleen was found perforated about 3 inches from the free lower border. Blood flowed from both wounds (entrances and exit). Haemorrhage was arrested by deep ligature by means of a long needle, threaded with silk, being passed *entirely* through the spleen central to and parallel with the bullet-track; the long ligature being then tied over the free border of the organ, so as to press the surfaces of the wound together tightly enough to arrest haemorrhage, but without tearing the splenic tissue. The ends of the ligature were cut short, and the peritoneal cavity closed after irrigation; the kidney being tamponed with gauze through the dorsal wound. The anterior wound healed by primary union; urine flowed freely for two days only from the dorsal wound which healed by granulation. The accident happened on 1st March, and the patient was discharged cured, on 22nd April.

Internal Haemorrhoids.

DUNDON, after an exhaustive paper on the subject of internal hemorrhoids, concludes as follows:—

(1). The ligature is the safest method of operating for internal hemorrhoids, as there is less likelihood of its being followed by hemorrhage, stricture, or stoma.

(2). The clamp and cautery causes less pain, shorter convalescence, and is less likely to be followed by retention of urine than when the ligature is used; but hemorrhage and stricture of the rectum may very often follow their improper application.

(3). The practice of WHITMAN's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hemorrhoids it should never be used, as it is liable to be

followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

(4). Simple dilatation of the sphincter, injection of carbolic acid, and MAULEY'S method are simple palliatives, and their use is very limited.

(5). There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case.—*Mathew's Med. Quarterly*.

The evils of neglecting Diseases of the Ear.

Few general practitioners having been specially trained to examine the ear, which lies deep within the temporal bone, and the educational process being a slow one, necessitating for its completion the sacrifice of many lives and countless ears, it often happens that failing to realise the results of a neglected otitis media or to differentiate it from abscess of the external ear or other harmless affections, they fondly hope that the disease will cure itself, or that in the case of a running ear the child will outgrow the disease, which had better not (!!!) be smothered with, and until human beings think less of hoarding up money and more of attending to their physical condition, and have their ears periodically examined, it will be impossible to recognise these cases at the time most favorable for treatment, which is necessary at its inception, or as soon as is possible after the diagnosis of suppurative otitis media, has been confirmed, which can be readily cured if taken in time, but if neglected, may lead to destruction of the ear or even loss of life. Deaf-mutism is a common result of suppurative otitis media, which may also be the starting-point as well as the deterrent factor in the treatment of:—Caries, necrosis, deafness, *arria* brain lesions, thrombosis of the lateral sinus, pyæmia, and infection and inflammation of the lungs, liver and other organs.

Treatment of Corneal Ulcers.

MULLA divides corneal ulcers into those of nervous and non-nervous origin. Nerve cases are not included. He cures the non-nervous cases in a few days, without scraping, cautery, or section. Histories of twelve cases were given of infiltrated corneal ulcers with hypopyon in some of the cases, 12/13 in one. The cure was usually complete in three days, with a small nebula remaining.

The treatment consisted of:—First, anesthesia by an 8 per cent. solution of cocaine. Then he applies a thin wafer of iodoform over the cornea and gently closes the lids; these are covered with a pad of iodoform, the whole secured by a flannel roller to give rest and prevent reinfection. After three days no further protection is necessary.

He has employed the same treatment as a preventive to infection after operations, with uniformly good results.—*Lancet*.

OBSTETRICS AND GYNECOLOGY.

Dysmenorrhœa.

PROFESSOR H. A. MULLA, M.D. describes dysmenorrhœa as nothing more or less than pelvic pain at the menstrual period and association with a large variety of diseases of the uterus, tubes and ovaries. In the majority of instances it is caused by small myomata, the presence of which, he thinks, is first discovered by careful rectal examination. He refers to two other types of dysmenorrhœa, the first occurring in girls under 20 years of age, and being associated with a variety of dyscrasia, the most prominent of which is chlorosis and the

other belonging to anæsthetic or hysterical groups, and being sometimes associated with defective development of the uterus and ovaries. Local treatment is almost useless, in it rarely being of value, but claims good results from careful attention to hygiene and regulation of exercise and study. He lays greatest stress on rest in bed, and recommends mild sedatives, hot tea, also in rather full doses combined with myrrh or asafoetida to empty the lower bowel, together with hot hip-baths to accentuate pelvic congestion and hasten the flow; but when serious pelvic lesions endangering life co-exist, he thinks the tubes, ovaries or uterus should unhesitatingly be removed. This latter procedure should also, he points out, be adopted even with healthy organs, to stop painful menstruation, which is wrecking the patient's life.

Scanty Menstruation.

DR. F. TOWNSEND finds that this condition is most usually the result of malnutrition in young and middle-aged women, whether married or single, and attributes it to chloro-anæmia, which must be rectified by intelligent medication, chief in which is iron, after the road has been prepared for its exhibition by the careful administration of salines. He also insists on a correction, as far as practicable, or removal of the "*epêche injuria forma*" such as jealousy, disappointments and other emotions which not only offend the affections, but also are often the immediate antecedents which eventually result in impoverishing the blood by lessening the number of blood globules, and thus becoming the starting-point of serious disease of the lungs and kidneys and many of the zymotic troubles so often encountered. He also advocates electricity as advantageous, and cautions that if a permanent cure is to be expected, persistent patience must be persevered in with the various forms of treatment laid down.

Fatty Heart as a cause of sudden Death during Labor.

MR. H. M. EAMES demonstrates the imperative necessity of insisting upon the recumbent position during the whole time that a person with a weak or diseased heart is in labor. He was suddenly called in to attend a big, stout plethoric woman in whom labor (full term) had set in four hours previously, and for the last couple of hours she walked up and down the room, when she complained of feeling ill. A stimulant having been given her, she appeared to revive, and Mr. EAMES was sent for; at the same time she recommenced her perambulations, the pains continuing at intervals, but just as he entered the door, she fell lifeless on the floor. Subsequent application of ether did no good, turning was not practicable, as the cervix was not sufficiently dilated, and her friends would not permit Cæsarean section.

Pregnancy after Gastro-jejunostomy.

J. MASSIAH having been called in to see a woman aged 38, who was ill with indigestion, diagnosed pyloric obstruction, for which he sent her to the Manchester Infirmary, where MR. WRIGHT performed gastro-jejunostomy for a large pyloric tumour with secondary nodules. As she seemed to grow more and more thin, she was sent to a seaside curative home (7 months later) where she remained for a month. Subsequent to this, she sent MR. DR. MASSIAH, complaining of swelling of the legs and other symptoms that made him suspect she was "*near her end*," but a week later, while cleansing the bath, she felt violent abdominal pains, which so increased, that she was compelled to lie down, when something inside burst. She thought it was "*a wind and water vapour*" left after MR. WRIGHT'S operation; but was surprised to find that she had given birth

the tumor in the early stages of life. The possibility of this tumor is that the "mother" never knew she was pregnant and the tumor was not removed until after the birth of the child. One of the numerous secondary tumors left completely unremoved; but after the birth of the child, the tumor began to decrease, per se and the mother to grow robust and pick up strength, flesh and color, while the tumor pains disappeared.

Strychnine as a Prophylactic in weak Labor Pain.

Dr. Dorr employs strychnine as a prophylactic in decreased muscular tonus and general weakness of pregnant women, as well as in cases giving a history of weak and irregular uterine contractions in previous labors, distinct weakness and flaccidity of the abdominal muscles, and post-partum hemorrhages from faulty contraction of the uterus. He prescribes 1-64 grain of the drug three times a day, commencing six or eight weeks before the date of the expected labor; eight days before the event the dose may be increased to 1-48 and 1-32 grain. The results are claimed to be very satisfactory.—*Pac. Med. Jour.*

Prolapsed Uteri in a Virginal Nullipara.

Dr. M. LIEBMANN records an instance of prolapsus uteri et vaginae in a virginal nullipara of only 17 years of age. Two years previously the patient noticed that something came down in the region of the genitals when she strained at stool or coughed. She consulted a midwife, who gave her a pessary with which to keep up the uterus. Later she came under the author's observation, who found her suffering from prolapsus uteri, and also from phthisis. On account of the latter condition and the severe cough, no operation was performed, but a ring pessary was introduced, which for a time was successful.—*Centralblatt für Gynäkologie.*

A Sign of Breech Presentation.

PINARD asserts that when, in a woman who has passed the sixth month of pregnancy, a sharp pain is produced by placing the hand on the fundus uteri, it may be almost affirmed that there is a breech presentation. The fact is very frequent, although not constant, being present in about 70 per cent. of cases. The pain is sometimes spontaneous, and if version is performed, it disappears. PINARD claims that the pain is due to the "irregular distention produced by the rounded mass of the head," but he does not explain how an irregular distention can be produced by a rounded mass.—*La Clinique Internal.*

Retrosession of a Uterine Fibro-myoma after removal of both Breasts.

HEIDENHAIN relates the case of a patient suffering from a large uterine fibroid which had disappeared seven months after the removal of both breasts for tumours and clearing out of the axilla. The nature of the mammary tumours is not stated. HEIDENHAIN attributes the retrosession of the fibroid to amputation of the breasts, and suggests this operation in certain cases in preference to hysterectomy. The woman was 44 years of age.—*Gazette de Gynecologie.*

Gynecologic Forceps Statistics.

SCHMIDT gives a series of 2,926 deliveries in the Beale Hospital between 1st May 1887, and 31st December 1892, of which number 186 (or 6.42 per cent. of the total) were delivered by the forceps, and of these, 139 (or 63.3 per cent.) were primiparae. Presentation in the second position was the most frequent cause for their use. The loss of blood was

estimated at 400 grams on the average. In 100 cases (5.6 per cent.) the perineum was ruptured, and the wound healed by primary union in 98 cases. The mortality being all there, deliveries was 1.28 per cent., but this was not due to the application of the forceps. The infant mortality was 19.5 per cent.—3.7 per cent. being the result of use of the forceps. SCHMIDT recommends their use when the pains diminish owing to the prolonged labor when the head is in a proper position and when the second stage has lasted more than two and a half hours.—*N. Y. Med. Jour.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Significance of the Venous Pulse.

Dr. JAMES MACKENZIE divides the venous pulse into two forms: (1) the *auricular*, presenting distinct evidence of functional activity of the right auricle, and ceasing the diastole, decreases, and finally disappears with the increase of the (2) *ventricular* venous pulse, which is a more advanced stage than the auricular, but appears only when there is organic disease of the heart itself as in valvular disease, yet when heart-failure is functional and not due to organic valvular disease, the auricular pulse persists to the very end. Although the disappearance of the venous pulse is sometimes a sign of the return to health, yet in other cases, it precedes a fatal termination, and its appearance, increase, decrease and disappearance give evidence of changes in blood-pressure not appreciable by any signs given by the arterial pulse while, as a general rule, increase of venous pressure implies diminution of arterial pressure, and the appearance of the ventricular wave gives information regarding the degree of incompetence of the tricuspid orifice as also of the exact time of closure of the pulmonary valves. In pulse irregularities a careful study of the venous pulse throws a new light upon the heart's movements and affords the only true knowledge of the action of the different chambers of the heart.

Normal Menstruation.

ANDREW F. CURRIER points out that menstruation, which may occur at any period between 9 and 20 years, is one of the signs of womanhood; still as it is not the only one, the family physician should carefully instruct those under his care concerning the precautions they should exercise during menstruation; for the unpleasant sensations or *melanias* are chiefly the result of undue vascular congestion and tension dependent on climate, altitude, habits, race, and national and family peculiarities, many of which can and ought to be corrected. No satisfactory explanation is forthcoming why menstruation should be so frequent and periodical, or why exhibit such variety of phenomena as it does; but all are agreed that the civilized woman suffers more than does the robust uncivilized one. The duration of menstruation fluctuates a great deal, as the complete period includes not only the flow, but also the *melanias* which precede or follow it and may, in ordinary health, last from 1 to 4 days. The one-day type being scanty, watery, painful in various localities and occurring in anemic or weak women or those whose genital organs are imperfect. The two-day type simulates the one-day, except that the blood may be natural and abundant on the first day, and scanty and watery on the second. In the three-day type, profuse hemorrhage seldom occurs, and the menstrual wave gradually advances and recedes, while there may or may not be pain. The four-day type may be quite normal as to pain and discharge, but the bleeding is usually abundant, the pain intense, and the menses more or less discolored, whereas if the flow is profuse, lasting from 5 to 7 days, serious disease of a local or less serious nature is likely to be present.

Functions of the pituitary body.

YAMALE AND SACCHI point out that the pituitary produces a secretion of profound importance in the nervous and neuromuscular systems, and that the intensity of the symptoms vary according to the extent of the removal of the gland. Main among the symptoms were:—Anorexia, listlessness, fall of temperature to subnormal, progressive hebetude of the animal, fibrillary twitchings and tremors of the muscles, followed later on by cramps and spasms and respiratory spasms (dyspnoea); but in complete extirpation of the gland, many of these symptoms abated if the animal was injected with pituitary extract.

Formation of Urea in the Liver.

FROM a long series of experiments on rabbits, **W. VON MEISTER** concludes (1) that the formation of urea ceases after complete removal of the liver, while the quantity excreted was in direct proportion to the quantity of liver remaining behind; and exhibits a parallelism between the quantity excreted and the growth of the remaining part of the liver. (2) That as far as three-fourths of the liver can be removed without affecting the mortality or inconveniencing the animal, and occlusion of the gallbladder without removing the hepatic duct does not affect the functions of the organism, but complete removal of the liver shortens the duration of life. (3) After removal of one or more lobes, the quantity of nitrogen in the urine diminishes, and the urea decreases relatively as well as absolutely; but the quantity of extractive substances increases in proportion to the decrease of the urea, and the larger the quantity of liver removed, the less the amount of urea excreted. (4) That while urea is undoubtedly formed in the liver, its primary origin is in the extractive substances, and the decrease of the urea is especially rapid during the first days after removal of liver tissue.

Pathology of Insanity.

AFTER due inquiry into the necessity for investigating the pathological and physiological anatomy of the brain, the London County Council has decided to establish a laboratory and appoint a pathologist at each of its lunatic asylums. And the first of its kind is now being built at Clabury Asylum, where the pathologist in charge will be offered £700 per annum. **DR. ALEXANDER** of Hanwell Asylum does not think it possible that any immediate results will be obtained, but **DR. CLAY SHAW**, the medical Superintendent of Banstead Asylum, is more sanguine, and thinks that if the paths of normal brain action are brought into direct relation with diseased processes which requires the special knowledge of the physiologist and pathologist combined, satisfactory conclusions could be arrived at, pointing to great improvement in the treatment and prevention, if not actually the cure of insanity and mental diseases. To this latter opinion incline the majority of the evidence received from brain specialists on the continent.

Bactericidal and Toxic Action of the Blood of the Insane.

As the result of 86 sets of observations made on idiots, maniacs, melancholics, paralytics, and persons with pell-agrous insanity, **D'ABUNDO** found that the toxicity and bactericidal power of the blood diminished in the depressed form, but increased in all other forms of insanity.

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The disposal of Garbage.

IN 1884 the treasure-chest of the New York City Department of Charities and Corrections was indented on for \$180,000 for the purchase of Riker's Island to which, after reclamation of its submerged lands, it is intended to transfer the penal institutions from Blackwell's Island, the southern portion of which is to be converted into a fine public park, but ignoring the lessons taught by Hart's Island the city authorities proceeded to recover the land by making

the submerged portions the "floating ground" for the New York refuse, and had "made" about 30 acres of land, where there arise such a far-reaching and highly objectionable stench from the rotting garbage that the dwellers on the Riker's Island side of New York threatened "mob law" if the nuisance were not abated. To remedy the nuisance, the authorities have taken advantage of the well-known germicidal and disinfecting properties of the hypochlorites, by erecting four vats, each capable of holding 1,000 gallons of sea-water, and containing a set of four electrodes of platinum and zinc through which passes the current from two dynamos to transmute the chlorides of the sea-water into hypochlorites, which are distributed (by steam pumps) over the refuse, in the form of a spray that has so far deodorized the stench that the authorities contemplate treating their city refuse dumps in a similar way and then conveying it to Riker's Island; but **DR. G. F. SHERRY** raises the objection—and a right one too—that before the refuse of the city can be safely utilised for the purpose of reclaiming submerged land, the putrescible portion of it must be rendered innocuous which cannot be done by any other agent than fire.

Natural Sanitation.

THE natural conditions which should be incident to the life of human beings, conducive to long and healthful life, are:—

- (a). Breeding from parents free from physical or mental taint.
- (b). Feeding the infant upon the mother's milk.
- (c). Higher regard for the physical than mental training of youth.
- (d). Pure air, pure water, pure food.
- (f). Wearing loose clothing.
- (g). Natural sleep and plenty of it.
- (h). Natural labor—physical or mental, unforced.
- (i). Dwelling houses free from filth, having free access of sunlight and air.
- (j). Use of earth closets.
- (k). Prompt elimination of effete matter from the body, by the lungs, skin, bowels, and kidneys.
- (l). Frequent washing of the body.
- (m). Frequent change of all articles of clothing.
- (n). Burning of the dead.
- (o). Exercise of passions within natural prompting.
- (p). Constant occupation, physical and mental.—*Diet and Hyg. Gaz.*

A new method of making milk palatable and digestible.

DR. ROBERT T. EDER, of Boston, gives a valuable way of preparing milk where other methods have not proved useful:—A pint of milk is gently warmed. Into it is dropped, very slowly and with constant stirring, about 30 minims of the dilute hydrochloric acid of the United States Pharmacopoeia. The milk should be stirred until it cools. In this way a very fine flocculent coagulum is produced, floating in the whey, which is easily accessible to the digestive secretions, while the whole fluid has lost somewhat of the flat and cloying taste which makes it unacceptable to so many. It will be noticed that milk prepared in this way differs from the various "wheys" in the highly important particular that the casein is retained and used, instead of being separated out as a distinct product, while it avoids the bitterness of pancreatinized milk.—(*Bos. Med. and Surg. Jour.*)

The importance of menstruation in determining mental irresponsibility.

KRAFFT-EBING reaches the following conclusions on this subject:—

1. It is useful to consider the mental soundness of women during menstruation from a medico-legal point of view.
2. It is advisable where a woman is held on a criminal charge to ascertain whether the commission of the act coin-

closed with the menstrual period; and by "period" is meant not only the days when there is actual flowing, but those before and after as well.

3. It is best to advise examination of the mental condition when such coincidence is established. This is indispensable when there is a personal history of neuropathic defect of mental disturbance at the time of previous menstrual periods, or when the nature of the act reveals any striking features.

4. When the menstrual process exerts a powerful influence on the mental life of the subject, the accused should be given the benefit of extenuating circumstances in the infliction of the penalty, even although there be no proof of menstrual insanity.

5. When the offence of crime has, in a person whose mind is impaired, occurred during the menstrual period, she must be declared irresponsible, for there is every reason to think the act due to emotional impulse.

6. But individuals who by reason of menstrual insanity would benefit by acquittal on this ground should be considered as dangerous in the extreme and subjected during the times of the menses to close surveillance. It is best to confine them to any asylum for the insane where they will be comfortably cared for and often cured of this menstrual instability of mind.—*Brooklyn Med. Jour.*

Charge of manslaughter against a Midwife for spreading Puerperal Fever.

DR. DANFORD THOMAS concluded an inquiry into the circumstances attending the death of HILDA GRAY, aged twenty-four, of Peckwater-street, Kentish-town, from puerperal fever. She had been attended by a midwife, by name RAKE, who, it is alleged, had continued to attend cases after being requested by DR. J. F. SYKES, the medical officer of health of St. Pancras, to desist from doing so, his attention having been called to three cases of puerperal fever in patients under her charge, and subsequently to two more, and then to three more—eight in all. It transpired in the course of the inquiry that of these eight cases five had died and MRS. RAKE was committed for trial on a charge of manslaughter. Under these circumstances we withhold all comment on a very painful case.—*Lancet.*

THERAPEUTICS AND PHARMACOLOGY.

For Insomnia and Constipation.

IN various neuroses, where both sleeplessness and constipation are common symptoms, the following is a useful prescription:—

R Ext. Cannabis Indicæ
Ext. Belladonnæ ... ½ an gr.
Pil. Aloes c. Ferro ... iv gr.
Mt. Pil. j.

S. To be taken at bed-time, every night if required.

Treatment of Acne Rosacea.

DR. PURDON, of Belfast, advocates the following plan of treatment in acne rosacea. The dietary and any gastric derangement having been attended to, the following local plan gives good results: Bathe affected parts with a spirit of horse-radish, say, in the morning; and, at bed-time, rub in pretty firmly a pomade of sulphur with a small quantity of carbolic acid. In place of the latter, sometimes good results are obtained by substituting 10 grains of the green iodide of mercury to the ounce. All comedones should be squeezed out with an "extractor." As a "refining" agent, ichthyol is often better than sulphur.—*Dub. Jour. Med. Scienc.*

To hide the taste of Chloral.

DR. R. HOLLAND calls attention to the fact that the taste of chloral hydrate is effectively masked by kumquats. Two or three drachms of the syrup should be placed in a tumbler with about two ounces of water. If to this is added about two ounces or so of gaseous (bottled) lemonade, the mixture may be drunk at leisure, and the soporific action of the drug is in no way impaired.—*The Clinical Journal.*

Cancer of the Cervix Uteri.

R Iodoformi ... gr. xv.
Ext. opii ... gr. viij.
Ess. bergamotte ... m℥.
Ol. theobrom. ... ʒiij.

M. Sig.: To make 12 suppositories; 1 to be introduced into the vagina when necessary.—*Med. Bulletin.*

Neurasthenia.

THE following was a favorite prescription of Sir Andrew Clark's:—

R Acid Phosphate ... ʒj.
Ext. Cocœ Liquid ... ʒss.
Ext. Damian, Liquid ... ʒss.
Tr. Nucis Vom. ... m℥x.
Syrup. Zingib. ... ʒj.
Aq. ad ʒss. Ft. Doals.

S. To be taken in water at 11 A.M. and 6 P.M.

The Therapeutic value of Lactopeptine in the treatment of gastric derangements occurring in Children and Infants resident in the Tropics.

DR. WOLFENDALE writes an original article in *Medical Reprints* on the value of lactopeptine as a therapeutic agent which he considers "the most valuable of all aids to the digestive system." European children resident in the tropics soon develop gastric derangements. The child becomes languid, peevish and fretful, the stomach refuses all food, anorexia persisting. The abdomen swells, and is very tender to the touch, owing to flatulence; after a time diarrhoea set in with offensive slimy stools containing mucus and curdled milk. Or persistent constipation is present. The child wastes rapidly, the limbs shrink, and the skin becomes flabby and hangs loosely.

Two cases are cited illustrative of the marked efficacy of lactopeptine: *Case I.*—The child was resident in Tropical Africa. For the first three months brought up on breast, then fed artificially with satisfactory progress for five weeks, after that time a grave change set in. The infant became fretful and cross, appetite was lost, vomiting set in, accompanied with obstinate diarrhoea and rapid wasting. At first *hydrargyrum creta* with lactopeptine was given, whereby the diarrhoea ceased on the second day, but the vomiting though less severe, still persisted. *Bismuth* and lactopeptine were now given, 3 grs. of each every three hours. The child improved rapidly, vomiting ceased, and the milk taken was digested easily. Lactopeptine in 3 grs. doses was continued for about a fortnight; the child regaining flesh and strength each day until the original state of health was restored. *Case II.*—Boy *et. 4* years, born in England, after three months' residence in the tropics, presented all the initial symptoms of the first case, *viz.*, painful distended abdomen, wasting, complete anorexia, constipation (diarrhoea at rare intervals) and vomiting occasionally, &c. Liver and spleen were not enlarged, but the face wore a pinched, anxious appearance. The patient had among other nutritious English foods, a supply of native foods, which although nutritious, were not digestible. Treat-

meat, ketchup, and sometimes butter, and lactopeptin in a grain dose after each meal. All native foods were prohibited, and a light nutritious diet substituted at regular intervals. The child's improvement began from the fourth day, and continued steadily until all the initial symptoms subsided and he regained his usual health.

Treatment of Mental Depression in Ovarian Disease.

Dr. ROBERT FLINN finds dilute hydrobromic acid the most useful for the mental depression associated with chronic uterine or auto-ovarian disease. He prescribed it alone in several very chronic cases with marked benefit, after other drugs had failed. The dose should be R_x xx, ter in die, as less is not of much value.—B. M. J.

Caustics in Malignant Disease.

1. The value of caustics in the treatment of malignant disease depends upon the use of proper caustics in their intelligent application in suitable cases.
2. A proper caustic is one which completely destroys and removes the malignant disease.
3. Muhl caustics are inefficient and dangerous, and therefore to be avoided.
4. Bongard's or Vienna paste is the most generally useful and oclastic.
5. Proper technique in application accentuates the value of caustics.
6. The suitable cases are those which have a limited extent and are easily accessible; or, in other words, cancer of the skin, lip and external in their incipient stages.
7. The prognosis should be most excellent, cure resulting in the vast majority of cases when treatment is early and thorough.—*Kansas Med. Jour.*

Antipyrin as an Antiseptic and Hemostatic.

ROSWELL PARK, of Buffalo, has found a 4 per cent. solution of antipyrin useful as a hemostatic in checking general oozing from a bleeding surface, and also by experiment claims for its antiseptic properties which compare favorably with most of the anilin and coal tar derivatives. By experiments on animals he has shown that it can be used with safety on the peritoneum, and also now employs it in general surgery. As a styptic it has the advantage of constricting the small vessels without causing any external clot, which may break down. In cases of epistaxis he has found it useful when sprayed into the nose. In this form of a spray to the nose he has found it useful in certain cases of inflammatory occlusion, and also for ordinary headaches, coryza, etc.—B. M. J.

Uses of Stale Bread.

If properly made from wholesome and nutritious material and well preserved, there are few other foods that can be combined into more varied and palatable dishes than left-over bread. To insure the perfect preservation of the fragments, the loaf itself should receive good care. Perfectly sweet, light, well-baked bread has not the same propensity to mould as a poorer loaf, but the best of bread is likely to become musty if its surroundings are not entirely wholesome. The receptacle used for keeping the loaves should be frequently washed, scalded, and dried. Crumbs and fragments should be kept in a separate receptacle and as thoroughly cared for as is the bread. It is well in cutting bread not to slice more than will be needed, and to use one loaf before beginning on another. Bread grows stale much faster after being cut.

Whole or half slices of bread which have become too dry to be palatable may be utilized for swissbake, which may be

made by placing the bread on perforated pans or wire cooking pans and toasting in a moderate oven for a half hour or longer, until it is browned evenly throughout the entire slice. Such swissbake may be prepared in considerable quantity and kept on hand in readiness for use. It will keep any length of time if stored in a dry place. It is serviceable for toasts, is excellently used with hot milk or cream, and makes a good substitute for the old-fashioned dumplings served with fruits and meats.

Broken pieces of bread, not suitable for swissbake, make excellent *croutons*, a most palatable accompaniment for soups, gruels, hot milk, etc. To prepare the *croutons*, cut the fragments as nearly uniform in size as possible—half loaf cubes are convenient—and place them in tins in a moderate oven. Let them become crisply dry and lightly browned, but not scorched. They are preferable to crackers for use in soups, and require so little work to prepare, and are so economical withal, that one who has once tried them will be likely to keep a supply on hand. The crumbs and still smaller fragments may be utilized for thickening soups and for various dishes, recipes for some of which we give in this number:—

Scalloped Cauliflower.—Prepare the cauliflower, and stem or boil until tender. If boiled, cook in equal parts of milk and water. Separate the cauliflower into bunches of equal size, place in a pudding dish, and cover with a white or cream sauce. Then sprinkle with bread crumbs, and brown in the oven.

Scalloped Tomatoes.—Take a pint of stewed tomatoes which have been rubbed through a colander, thicken with one and one fourth cups of lightly picked crumbs of Graham or whole-wheat bread, or a sufficient quantity to make it quite thick, and salt if desired, and one half cup of sweet cream. Mix well and bake for twenty minutes.

Scalloped Turnips.—Prepare and boil whole white turnips until nearly tender; cut into thin slices, lay in an earthen pudding dish, pour over them a white sauce sufficient to cover, made by cooking a tablespoonful of flour in a pint of milk, part cream if preferred, until thickened. Season with salt, sprinkle the top lightly with grated bread crumbs, and bake in a quick oven until of a rich brown.

Savory Lentils.—Take equal quantities of stewed brown lentils that have been rubbed through a colander to remove the skins, and unfermented bread crumbs. Moisten with a little rich milk or cream, season with salt and a very little powdered sage, and brown in a moderate oven.—F. E. K. is Good Health

Quinine Blindness.

DR. CHAIRBORNE, in reporting a case of quinine amaurosis in the *New York Medical Journal*, concludes as follows:—

From the study of this subject the following conclusions may be drawn:

1. Quinine in toxic doses may produce blindness.
2. The toxic dose is distinctly indeterminate.
3. The duration of the amaurosis varies largely.
4. The field of vision remains contracted.
5. Central vision usually returns to the normal.
6. There is color blindness at first; the color perception is ultimately restored within the central field.
7. The ophthalmoscopic picture is that of wide atrophy.
8. Experiments on dogs show that there is atrophy of the entire optic tract.
9. The same experiments show that the cells of the ganglion are probably not affected.
10. Treatment is of no avail.

Correspondence.

DR. ERNEST HART ON INDIAN SANITATION AND THE MEDICAL SERVICES.

To the Editor, "INDIAN MEDICAL RECORD."

SIR,—I beg to send for publication in the *Record* the following extract from the *Times of India* reporting Mr. ERNEST HART's latest utterances, which so strangely accord with the suggested reforms put forward from time to time by the *Record*, that I feel, in simple justice to Dr. ERNEST HART they ought to be put before the local profession, though I must admit the *Record* has not gone mad in abusing Dr. HART and the Indian Medical Congress. Here is the extract verbatim from the *Times of India* :—

"MR. ERNEST HART, Editor of the *British Medical Journal* and Chairman of the Parliamentary Committee of the British Medical Association, left by Saturday's mail steamer, his departure having been hastened by illness which has prevented him from continuing his journey in the north beyond Agra, as well as from fulfilling a number of engagements in Bombay for the current week, notably a conference with the leading Mahomedans in Bombay, at which he had hoped to discuss the question of the sanitation of the Mecca pilgrimages. Before leaving on Saturday, Mr. HART found an opportunity of expressing his views on various questions connected with the organisation and work of the Medical Services in India, and with the measures taken for investigating and dealing with epidemic disease in this country. Dealing first with the organisation of the Medical Services, Mr. HART spoke of the existing system—under which the Army Medical Staff looked after the health of European troops and the Indian Medical Service, essentially a military service, was entrusted with a multiplicity of duties partly military and partly civil—as radically wrong. The officers of the Army Medical Staff were trained for a particular class of work, and, except in large cantonments, they often had so little to do that their day's work was over by eleven o'clock in the day. Here then there was obviously a great waste of professional strength. On the other hand, the Indian Medical Service were often over-burdened with a variety of duties, for most of which they had no special qualification. They had all learnt their work as army surgeons at Netley; but what preparation had they made for the diverse duties which come within the range of the Government Medical Service in India? The Indian Medical Service man seems to be expected by Government to be fit for any post that may be vacant. As Civil Surgeon it is taken for granted that he has time to look after a jail as well as the head-quarters hospital, and to be responsible for the dispensaries in his district. He is assumed to be equally fit to be in charge of a lunatic asylum, and in the capacity of Sanitary Commissioner, to supervise the sanitation of a province, though the chances are that he has had no special training for either post. No one would ever think of deliberately establishing such an anomalous state of things. But that is what is a bizarre and stereotyped system, under which men who were trained for work of one kind were put to work of quite another kind, and the consequence was that there was not only a great waste of power, but that measures of vital importance to the health of the community were either neglected or imperfectly carried out.

"Mr. HART insisted upon the importance of a greater regard being paid to the principle of specialisation of functions. The first step in this direction would be the abolition of the distinction between the medical organisation for the European and the Native armies. Let there be one military service charged with the medical care of British as well as Native regiments, and let the civil military service have an organisation of its own. We should then have in the Indian Medical Service a staff of men trained for their special duties and capable of dealing with sanitary questions as they arise. Under the present system, he said, men work their way up by seniority to a position in which they fill the dual capacity of Principal Medical Officer of the Army, and Sanitary Commissioner with the Government. What guarantee have

we that they are capable of filling the place of civil sanitary authority? Look at the administration reports which you utter year come from them? They tell the same old tale, and tell it in the same way—a tale of so many deaths from a particular disease this year contrasted with so many in the year before. This is all very well, but it is mere clerical work, and we want something more than that. We do not want to be told that there was an outbreak of typhoid or cholera at such and such a place, and that so many people died of it, and that it is probably due to pollution of the water supply or the milk supply. Yet that is all that is told. If anything like a searching inquiry is made into the condition of the food, or the water, or the milk, or the drainage, we hear nothing of it. This was what might be expected under a system which almost totally ignored bacteriological investigations. The chemical analysis of water was common enough, but this was never child's play to the bacteriological analysis of these days; yet with the exception of Mr. HANSEN of Agra, of whose work Mr. HART spoke in the highest terms, there was no one in the medical service who was carrying on investigations of this kind. Every medical officer in the service of Government ought to know how to conduct at least a preliminary bacteriological analysis of the water or milk in a locality in which typhoid or cholera broke out, and in each presidency there should be a Government bacteriologist to whom recourse could be had. He doubted whether even so simple a precaution as boiling the water and the milk on the first appearance of cholera or typhoid in a barrack was ever taken; if it was, there was no record of it in the Sanitary Commissioners' reports. Nor had the simple expedient of quarantining hospitals been resorted to as it ought to have been—"quarantining" the cooks, the cooking rooms, and the hospital attendants, and seeing that no supplies of any kind were brought into the hospital, without the source being known. A reference to the failure, in the case of the cholera outbreak at the Bombay Jamsjee Hospital, to establish any definite cause, led Mr. HART to again insist upon the importance of investigations in cases of this kind—which, he said, should be conducted by men of special attainments and well abreast of the latest scientific knowledge. As to typhoid outbreaks, one eminent authority had said that, considering the absolute control which could be exercised over the supplies, no soldier should die of typhoid in barracks without somebody being hanged for it. Yet, when these outbreaks occurred, the whole thing was treated as a mystery. Mr. HANSEN's analysis, however, of the so-called water consumed by one regiment and of the milk and the water at Lucknow and Cawnpore, showed that there was no mystery in it. Mr. HANSEN, one day, during an outbreak of cholera, came upon a lady of Joggia who were praying to Bhawanee, the goddess of cholera, to withdraw the "armies" with which she was devastating the place. He told them that he would show them the "armies," and could tell them how they might be got rid of; and, putting some polluted water under the microscope, he pointed out the cholera bacilli which were the cause of mischief. Then, to show them how the "armies" could be dispersed, he poured a few drops of permanganate of potash into the water. A good deal could be done by disseminating simple teaching on sanitation amongst the people—for instance by making known, possibly with the help of vaccination officers, that immunity can be secured by boiling all the water that is drunk as soon as cholera appears in a village. Again a civil medical service that was worthy of the name would be in close relationship with the Municipalities, and it should have power to order all necessary precautions whenever an epidemic threatened. We might have to wait a long time for any large scheme of reorganisation to be carried out. In the meantime, one simple measure ought to be adopted without delay. The "official filter" in every Indian hospital and barrack was the Macnamara—the cheapest and the worst filter in existence, for, if water containing typhoid germs were put into it, the germs remained in it, and the filter, instead of purifying the water, became a culture bed for typhoid. It should be at once replaced by the Pasteur filter, which had killed typhoid in the French army and was the best filter in existence.

I sincerely trust that you and the local profession whom you so ably and stoutly represent, will take heart from Dr. HART's attitude and look upon him as a friend, and not as a foe.

Yours &c., GEORGE LIEUT. COL., I. M. S.

BOMBAY, 21st March 1895.

MEDICAL REFORM: SOME RECENT VIEWS AND A RETROSPECT.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—It was with particular interest and pleasure that I read the remarks of MR. ERNEST HART on the subject of Indian sanitation and the Medical Service of India, which appeared in the *Times of India*; and as one who has given some thought to the subject and worked to rouse popular interest in the same, I would crave space for a few observations. It is now abundantly clear that the subject of Indian sanitation and the medical services of India is of absorbing interest not only to the profession in India, but also to the Indian people and the Government of the country. The early utterances of MR. HART at Calcutta showed traces of official coloring and provoked unfavorable comments from non-official and independent medical journals. I for one, however, awaited with much interest and no little confidence an expression of his matured opinion, after he had been in the country for sometime and had seen things with his own eyes, and drawn his own independent conclusions; for it has long been a matter of conviction with me that the existing constitution of the medical service of India can produce but one impression on the minds of those who are disposed to think for themselves, and consider the subject without bias and with information as to the present-day requirements of medical science and education. It is no small satisfaction to me to find that my utterances, both as regards the present constitution of the medical services and its working, and the necessity for a radical reconstitution of the same, should have been so much in accord with the matured views of MR. ERNEST HART. For such a clear and emphatic expression of such views the whole independent Indian profession is truly indebted to him, and to you Sir, for affording him an opportunity of publishing them to the world. Let me briefly summarise the main points of MR. HART's remarks as to the constitution of the service, and the effects of its working. MR. HART's emphatic remarks are:—It is "a bizarre and stereotyped system, with an anomalous state of things in which the I. M. S. man seems to be expected by Government to be fit for any post that may be vacant. He is assumed to be equally fit to be in charge of a lunatic asylum, and in the capacity of a sanitary commissioner to supervise the sanitation of a province, though the chances are that he has had no special training for either post." And the cause thereof is not far to seek, for says MR. HART: "The I. M. S. men are overburdened with duties for most of which they had no special qualification," and naturally so, for "they had all learnt their work as Army Surgeons in Netley; but what preparation had they made for the diverse duties which come within the range of the Government Medical Service in India?" "The existing system," MR. HART characterises, "therefore is radically wrong." As illustrations of the evils of the working of the existing system, he notices the fact that "men work their way up by seniority to a position in which they fill the dual capacity of Principal Medical Officer of the Army and Sanitary Commissioner with Government. What guarantee have we that they are capable of filling the place of chief sanitary authorities?" As a natural consequence of such a systematic development of official experts by

age gradation, he points to the official reports on medical subjects as being no better productions than "mere clerical work," for "we do not want to be told," says MR. HART, "that there was an outbreak of typhoid or cholera at such and such a place, and that so many people died of it, and that it is probably due to a pollution of the water-supply or the milk supply. Yet this is all that is told." And he might have added that under the present regime it required a severe cholera epidemic in a teaching presidency hospital to apprise the Surgeon-General, of the terrible condition of the hospital store-rooms, its filthy surroundings and inefficient and bad drainage and water-supply—conditions which seem somehow mysteriously to vanish from view and get replaced by gorgeous perfection at the annual inspection visits of the same vigilant officers. As to scientific research bearing on bacteriology, MR. HART says that with the single exception of MR. HANKIN, there was no one in the medical service who was carrying on investigations of the kind, and in this connection MR. HART urged in reference to investigations into the recent cholera outbreak at the J. J. Hospital, that it should have been conducted by men of special attainments and well abreast of the latest scientific knowledge—the very things so earnestly urged in the unsuccessful prayer of the Bombay Medical Union to the local Government. As a further and very disquieting result of the working of a system "under which (in MR. HART's words) men who were trained for the work of one kind are put to work of quite another kind." MR. HART points out that "measures of vital importance to the health of the community were either neglected or imperfectly carried out." This, I may be permitted to say, is what I have repeatedly and consistently urged, both in my memo. on the subject of the reconstruction of the civil medical service of India and its separation from the military medical service, and in my public speeches and correspondence, and which is embodied in the last Congress Resolution, viz., that "the present constitution of the higher civil medical service of India is anomalous, indefensible in principle, mischievous in practice, and unsuited to existing conditions and requirements, and opposed to the interests of the public." And this because (1) the I. M. S. enlistment is a purely military enlistment with tests and subsequent instruction suited to the requirements of a military service and a complete absence of test and instruction so much needed for the various civil departments connected with education, science and sanitation; (2) the present system means that posts are found for men and not men for posts; (3) posts are won not by merit and ability and special training, but by seniority in military standing, as when the Surgeon-General gravitates to his post by the mere weight of years, (4) because of the I. M. S. man being assumed by Government fit to play the rôle of a professor or political agent, ophthalmologist or lunacy commissioner, according as the conveniences of the service may be supposed to require; and because the very act of the donning of the Surgeon-General's hat at the prescribed age of investiture is taken by Government as carrying with it the power of infusing into the head of the individual whose turn it comes by reason of his age, to wear the hat—expert knowledge not only in one, but in all the branches of medical science.

And as to the remedy I have suggested that the military should be separated from the civil; and that inasmuch as the I. M. S. men, when on military duty, are under the Army Medical Surgeon-General, there should be an amalgamation of the military services somewhat on the plan suggested by the Crawford and Cunningham Committee; there should be one Royal Military Service, as it practically now is, under one military Surgeon-General with two branches—the British and the Indian—the latter having the care of Indian troops, and the former of the British troops. (2). The Civil Medical Service should be a distinct service with an organisation of its own, in which men are marched to their posts through the right avenues of special training and merit, wherever found, so that each department exists for itself, and leads a healthy, independent life, and is not subordinated to the convenience of any service or other interests than its own. And what does Mr. HART suggest? He insists upon the importance of the principle of specialisation of functions, and advises, as the first step the abolition of the distinction between the medical organisation for the European and Native armies. "Let there be one military medical service charged with the care of British as well as native regiments, and let the civil medical service have an organisation of its own." "We should then have in the civil medical service of the country," says Mr. HART, "a staff of men trained for the special duties and capable of dealing with sanitary questions as they arise." Only last year, when a Swedish medical professor who first would not believe that the state of things above described really existed, inquired of some people with surprise how such a state could be tolerated in the midst of British civilisation of the present day; he was startled with the remark "Oh, it is Dr. BAHADHURI who has poisoned your mind." And again, when my solitary voice in reference to the medical and scientific aspects of that memorable Tower Tragedy Case met with a powerful echo from the *British Medical Journal* and the *Lancet*—two such influential and accredited organs of British medical profession—an echo, which I may be allowed to say with some pride, practically helped my community to purge itself of the unmerited slur that was sought to be cast on it in some quarters, it was openly suggested that I had nobbled the two leading English organs. And I wonder now if some speculative and penetrating minds would not be disposed to trace some similar influence at work in the strikingly close similarity of the observations and suggestions of Mr. HART summarised in the early part of this letter, with those which I have so repeatedly expressed. Only I have not had the pleasure of meeting Mr. HART or of communicating with him, since his arrival in India. The true explanation of course is what I have already given, viz., given the right information as to what the medical service of a civilised country ought to be, and what it unfortunately happens to be here, there can be one conclusion, and only one arrived at by all unbiased and well-informed minds. My connection with the question of medical reform has been often enough misconstrued and misrepresented, and I would beg permission at this opportunity to say a few words by way of personal explanation, even at the sacrifice as it may appear to some—of modesty. My advocacy of medical reform and the

necessity of reconstruction of the civil medical service has gone through several stages. At the first stage, when I had no connection with the college, it met with affected scorn and ridicule, and a noisy chorus of whatever is, is right. We were told that everything was the "best of the best of this world," and that my cry was the cry of an expectant interloper—or of one with a chance to enter "our fields." Later, when actually in the college, my action was put down as the cry of an irregular, therefore non-military professor, and therefore not worth notice. At the same time it began to be doubted if the refrain of "whatever is, is right" was quite correct. And now has come the stage when the doubts have been reduced to certainty, and my cry of whatever is is wrong is being admitted, but of course not without a counterfeiting that I have proclaimed it so atrociously loud. And as a reason thereof, they must needs suggest the circumstance of my severance from the college. Suggestion of motives by opponents is but a *dernier resort* of baffled opposition, and a passionate inclination to throw dirt at truth. Attaching the personality of the worker is an oft-resorted dodge with some to discredit a good cause. When I had the honor to advocate the cause of the Indian mill industry before the Hygienic Congress in London, it was sought by my adversary, Mr. HOET HALLET and his party, to discredit my advocacy, by calling me a paid advocate. I was then advocating not only the cause of the mill-owners of Bombay, but also the policy of the very Government who, most unaccountably, cancelled their obligation to send me as their delegate on the score of the Bombay Surgeon-General objecting to my youth, a fault I am gradually mending. But all the same, victory came to our cause, and victory came not because of me or my advocacy, but because the cause itself was so good and true. I had only tried to be a fearless and faithful spokesman. Without a boast I may say that in my present fight thorough reform, involving a complete abandonment of the present anomalous and indefensible system, and a thorough emancipation of the Indian medical profession from the degraded condition in which it has labored so long, have been my sole aim. It is only to convenient memories that my attacks on the present system will appear recent and an outcome of my being not allowed to work at the College and Hospital even without any salary. Let me remind my opponents that, as I said at a recent gathering of my professional brethren, I was at war with the present system long before I entered college. I remained at war with the system all the time I was at the College, and I mean to do the same till thorough reform is really taken in hand and honestly carried out. The disappointment to me was the non-realisation of my very natural expectation. I had hoped that it would be understood that all the professors had but one aim, viz., the good of medical education and the advancement of science, irrespective of the service or class to which they may belong, and that I would meet with co-operation in my work of reform, as I had thought that the present race of professors walked in the footsteps of the father of the College—CHARLES MORRHEAD—himself a distinguished member of their own service, who had publicly declared that "there is probably no better mode of improving our institutions than pointing out the defects

and so fixing attention upon them, as to lead to every opportunity of correcting them being steadily and systematically taken advantage of." In attacking a system one has to give illustrations, and the more real the illustrations the more striking the awfulness of the defects, and truth, unlike fiction, bites and not barks.

In drawing upon instances for such illustrations, one must resort to personal knowledge, and it is to be deplored that such citations should have been twisted and represented as personal attacks, and have brought into being a swarm of enemies. I mind that not. For it is the pushing forward of the cause and the truth that has been the aim and not the making of friends. And if the cause has advanced so far as to wring out from the opponents a confession, and bring forth Mr. HART's authoritative and independent testimony that the present system is radically wrong and requires thorough overhauling and reconstructing on the basis of what obtains in every other civilised country, it is because the cause is as good and great as the evils of the present system are deep and multifarious, and not because of my persistent or even as some would say, acrimonious advocacy. I claim no credit for my advocacy, but I certainly do claim to have had the good fortune to be the instrument of the times in bringing to the surface the great and deep defects of the system arresting popular attention thereto and securing public co-operation for their removal. I would again appeal to the press of the country to keep busy at what really is not so much the profession as the country's cause, and I earnestly hope that success will attend the efforts that are about to be made to ventilate the subject at public meetings in the country and to memorialise the Secretary of State and the Government of India, and otherwise represent the matter by personal pleading before the bar of the British public and profession. It is a hopeful sign of the times that, as I have reason to believe, the subject has enlisted the active sympathy of many influential members of the profession and of members of the service itself resident in England; and Mr. HART, of course, is a host in himself.

One word with regard to a local matter in reference to the principle of specialisation of functions. It was the agitation on the subject of medical education and teaching and the awful results of the University examinations in physiology in a particular year for which I was not a little abused, that led to some violent changes in the college, and the issuing of the memorable reform resolution of 1889, in which it was laid down that specially qualified men were to be selected for special subjects, and that having so selected them, they were to be kept to their own subjects and not made to make a tour, as of old, of the various college professorships. And the principles were carried out at once in the instance of the chair of physiology, for which a fresh and capable man from the University of London was selected. Nay more, he had subsequently facilities to work at the subject in the London University College, Physiological Laboratory, and it was no small satisfaction that with a stroke of the pen, as it were, the primitive physiology teaching which had obtained in the Presidency College for years, was transformed into the common-sense instruction of modern times. Latterly, however, the principle and practice of men for posts and the

standard of special training were cast to the winds with a lament by way of explanation, that temporary necessities of the service may override the needs of education and science. But it is feared, as *rumour* has it, that this special and specially trained professor of physiology, to whom a further inducement of Rs. 200 a month was given, by taking on to him what used to be an appendage of the medicine professor, viz., the lectureship in hygiene, is now seen to leave his laboratory and his work for the practice of ophthalmology, and thus the physiologist is to be transformed into an ophthalmic surgeon. The pathologist, also a specially selected professor, is to be transformed into a physiologist. Thus on the leaving of the ophthalmic surgeon, it is not his class and teaching that is to be entrusted to new hands, but a general shunting and misplacing of men is to happen, so that the old and practised physiologist is to appear on the college-board as an eye-surgeon, and the old and practised pathologist as the physiologist, and somebody else as the pathologist. This is specialisation of function as understood by the Surgeon-General. It is to be hoped that Lord SANDHURST, who is fresh from a country where specialisation of function is differently understood, will set his face against this chess-board shuffling of men by the Surgeon-General in this hot country.

Yours &c., K. N. BAHADURJI, M.D., Lond.

23rd March 1895.

OFFICIAL OPINION AS TO INDIA'S MEDICAL NEEDS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I have just received the *Indian Medical Record* of 16th March, and write to say how cordially the great majority of the medical profession serving in India ought to agree with your proposal to bring the subject of the reform of the medical services of India, and the larger utilisation of local talent at cheaper cost before the House of Commons. In this way the overworked Indian Medical Service would be relieved of all civil duties and of all private practice. All district surgeons are apparently overworked, and as such they should be debarred from private practice, which must necessarily interfere with their official duties.

DR. HART considers the Commissioned Officers are overworked even by official duties, why not relieve them of some of their civil appointments, and give that work to the Subordinate Medical Department, who already perform the duty, and do everything except signing their names. I am sure that every one who knows the method of medical work in India must realise that it would be impossible for any medical officer to perform unaided the multifarious duties expected of him.

My name here subscribed is not intended for publication, but this letter is to let you know there are numbers of Commissioned Officers serving in India, who realise the fact that the duties which it would ordinarily take five men to do efficiently, are performed by them thoroughly in a few hours, because there are five men of the Subordinate Medical Department working under them.

Yours, &c., SCHOON MAJOR, A. M. S.

MADRAS, 22nd March 1895.

Hosp. Asst. G. Backusway Chetty relinquished charge of Nizam Hosp., Insulin, Northern Shan States, on 28th Jany., and Western charge of Gaipost Hosp., Thabaw, Northern Shan States, on 2nd Feby.

Sergeant Maj. N. Learler, A. M. S., leaves for six months, on urgent private affairs.

Mrs. H. Barlow, passed the lower standard in Hindustani.

The undermentioned officers are granted leave out of India :—
 Surg.-Major, Temp. Col. R. de la C. Corbett, D. S. O., A. M. S. for six months (p.a.); Surgn.-Maj. J. Batterby, A. M. S. for six months (p.a.); Surgn.-Maj. A. G. Rose A. M. S. for six months (p.a.); Surgn.-Capt. T. W. O'H. Hamilton, for six months (p.a.); Surgn.-Maj. S. F. Loughheed, for six months (p.a.).

Surgn.-Capt. H. S. Woolf, M.B., Med. Offr., 44th Gurkha Bde, is apptd. to charge of Manipur State, in addition to his Mil. duties, from 20th Feby.

Privilege leave for two months is granted to Hosp. Asst. Nabin Chandra Das, Bhobaganj Railway Diap., Sylhet Dist. from 6th March, and Hosp. Asst. Baikuntha Chandra Chakravarti, a superny, in Sylh t Dist, appl'd to charge of Bhobaganj Railway Diap. from 6th March during his absence.

The charge for inserting a Domestic Occurrence is Re. 1 for subscribers and Re. 2. for non-subscribers, which should be forwarded in stamps with the announcement.

FEARNSIDE.—On the 8th March, at Cannanore, the wife of Surgn.-Capt. C. F. Fearnside, I. M. S., of a daughter,

WATSON.—On the 18th March, at Calcutta, the wife of
W. B. H. Watson, Dental Surgn., of a daughter.

DR. CRESPIGNY.—On the 15th Feby. at Crowcombe, Beckenham, Eyre Champion de Crespigny, M.D., of the Bombay Medical Service, son of the late Rev. Heaton Champion de Crespigny, aged 72 years.

GILCHRIST.—On the 28th Feby. at Alverstoke, Rochester, Surgn.-Maj. W. Gilchrist, M.D., late H.E.I.C.S.—aged 88 years.

J. W. (Kimari).—Yours is a difficult position, you will find it best to make a name for yourself before you take any step to mend matters.

C. V. (Blacktown).—The transactions of the Congress are not as yet available.

J. R. S. (Nabashu).—Surgeon-Captain Wade having published his statement of the accounts of the W. M. O. Fund, it now remains for the subscribers to vote him their thanks and to communicate their views for its future management.

G. G. S. (Nature).—If you will kindly send us an abbreviated notice of the book we shall be glad to publish it.

A. N. K. M. (Tarkenton).—The certificates will be issued when ready. You are sure to be pleased with them.

2.2. (Dissapour).—Follow the advice given you, and inform us of the result.

4. N. L. (Newington) - He thought we might discuss the rules pertaining military. However, important laws regarding in private practice.

K. C. M. (Jahannad)—The response of the Government has not yet been received, but we are greatly informed that the recommendations of the Indian Medical Association are being carefully considered.

T. M. N. (Cludderghat).—You may apply to the Manager of this Journal for any medical books you need, and he will order them for you.

A Subscriber in the Station Hospital, Farnborough, who sent us on the 4th March a Government Remittance transfer receipt for Rs. 9, will greatly oblige by sending us his name, as this item was omitted by him.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chirurist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Surgical Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganja Tibbat—Gaidard's Medical Journal—Oriente Journal of Medicine—Scalpel—The Practitioner—Medical Mission.

Gazettes of the Governments of India, N. W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Bengal Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineer—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Daily Indian Advocate—Indian Mirror—Bangalore—Karnataka—Sanku Patrika.—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine.

BOOKS.—*Anglo-Urdu Medical Dictionary*. By Rev. George Small, M.A. (Publishers: Tucker, Spink & Co., Calcutta, 1895).

Diseases of the Breast. By W. Roger Williams, F.R.C.S.
(Publishers: John Bale and Sons, London, 1894). Price
£1-1-0.

Methods of operating for Obituaries. By Sergt. Capt.
G. H. Flak. (Publishers: J. and A. Churchill, London.)
Price 5s.

[illegible]

Original Articles.

SEWAGE FARMING IN MADRAS, AND THE
FUTURITY OF THE SYSTEM FOR INDIA.By J. NIELD COOM, M.D.C.S.
Health Officer, Madras.

How to dispose of sewage has always been a problem of paramount importance. I do not propose to discuss the laws of MANU or MOHAK, or matters of ancient history. For my present purpose sanitation may be said to have commenced in the latter half of the century. In 1837 the Royal Sewage Commissioners laid it down as an axiom that "the right way to dispose of town sewage is to apply it continuously to land." However, considerable difficulties were experienced in putting the principle into practice. The heavy soils found in most parts of England, the abundant rainfall throughout the greater part of the year, the low temperature during the winter months, when vegetable life is practically at a standstill, and the difficulty and expense of acquiring suitable lands of sufficient extent in the natural direction of the drainage, have prevented the application of the sewage to the land becoming in any sense general. In 1875 the Committee appointed by the Local Government Board to inquire into the various methods of sewage disposal reported "that land irrigation is not practicable in all cases." The object of this paper is to shew that the adverse conditions which prevented the general adoption of this method of disposing of town sewage in England are for the most part absent in India. A trial extending over a quarter of a century has been made in Madras, where the local conditions are in no way exceptionally favorable, and has proved that an almost unlimited amount of sewage can be disposed of in this way in accordance with the best hygienic principles, and further that the produce of the farms finds a ready market and realises a handsome profit on the outlay. At the same time I hope to give such practical details as will enable any one to make a more or less extended trial of the system with good prospects of success.

The idea of adopting land irrigation as the means of disposing of sewage in Madras was conceived by Mr. STANDING-LINE, the Municipal Engineer, in the year 1869. No worse site could have been found anywhere about Madras than that of the first experiment. This was in the neighbourhood of Chulay, and is now known as the D'MELLOWS Road farm. It was a dismal swamp, periodically submerged by salt water, which on evaporation deposited a saline mud. The soil was black, plastic and retentive as stiff clay. Not even a blade of grass grew there.

Operations were commenced in June 1869. The swamp was reclaimed by depositing street sweepings and was planted with guinea grass. Some crops were obtained, but subsequently difficulties were encountered. With the advent of the hot weather of 1870, evaporation increased considerably, and salt was drawn to the surface forming a saline efflorescence. If the ground was allowed to rest a few days, a large quantity of guinea grass sprang up, and some herbage, or clover, that had been planted, was not strong. A small crop of grass sprang up, which is known as cow grass

(*Cynodon Dactylon*), and is liked by cattle, though unsuitable for horses. Moreover, the surface sank irregularly, throwing out the grading of the beds and necessitating a large amount of manual labor. Later on, suspicion was made by an agricultural expert, who traced the main cause of the want of success to the sub-soil water, which was found in some parts of the farm at from four inches to two feet from the surface. The worst parts of the farm were underdrained at intervals of six feet with pipes running four feet from the surface, which was aided by the deposit of rubbish, and after this, no further difficulty was experienced. My own opinion is that the pipes in this case were of little or no use, as they were placed below the level of the sub-soil water and thus of no effect. The whole neighbourhood is low and swampy, and at the present time water is found at from eighteen inches to two feet from the surface.

The next experiment was made in 1870 at Krishnaspett, near the sea shore. Half the land taken up consisted of pure sea sand, the remainder of land which had been reclaimed with rubbish and covered with a thin stratum of sand. Here no difficulty was encountered, the soil being porous and permitting the great desideratum of sewage farming free downward percolation. Heavy crops were soon raised, amounting in 1871-72 to about 60 tons of grass per acre. Since then a number of farms have been started, the principal one being known as the Black Town farm. This is admirably situated on the Beach 2½ miles north of the town. It is so close to the shore that last year a considerable portion of it was carried away by a heavy sea. Some of the farms are in inhabited areas and are of comparatively small size. This is due to the want of any general system of drainage in the town. In my opinion the fundamental principle for any system of sewerage for Madras should be to carry all the sewage to the north and dispose of it on one large farm, which could be made by the extension of the present Black Town farm. This would be more economical, and in other ways preferable, to having a number of small farms scattered over the town.

Successful sewage-farming is to a considerable extent dependant on physical conditions. The geology and surface of Madras are thus described in a recent report by Mr. EDWARD COOMINS, C.E.:—"The surface and subsoil consists, as a rule, of deposits of white and gray sand in which occur at irregular intervals, thin beds of clay. Water is found below the surface at varying depths but generally in the low-lying parts of the districts it corresponds with the mean level of the sea. At no part of this sandy plain are there any considerable elevations of the surface, the maximum heights are from 20 to 24 feet above mean sea level, while many portions of the town are only 2 feet to 6 feet above that level. The average elevation of the surface may be taken at about 8 or 10 feet. The higher parts of the town being principally occupied by private houses with large compounds have no drainage system, provision only being made for storm water. The parts providing sewage to be disposed of are all, if anything, below the average height given, which necessitates the lifting of the sewage by pumps, either from central pumping stations or from wells on the farms."

which is a costly undertaking. At first only the water-lift of the country was used. This is known as the "pootah," and consists of a lever balanced on a strong upright and worked up and down by men stepping from one side of the fulcrum to the other. But for any kind of manual pumping to be successful, constant supervision is required, and now for the principal farms this primitive system has been superseded by the steam pump, which is in every way more satisfactory. Gwynne centrifugal pumps have been found to answer best. The Royapuram pumping station, from which the sewage of Black Town is pumped to the Black Town farms, is fitted with three of them, each 15 inches in diameter. The sewage is lifted from a well, into which three sewers empty their contents and discharged into a cast iron main, 24 inches in diameter and about a mile and a third in length, being carried the remainder of the distance of $2\frac{1}{2}$ miles in an open masonry channel. No further lifting is required after the sewage reaches the farm. Pumping at this station is carried on on an average 22½ hours daily, the amount of sewage pumped being about 3 million gallons. Night-soil is removed on the pail system, and is not supposed to enter the drains, though the urine and washings of the latrines do so. The annual rainfall varies considerably, the average being about 50 inches, which is above the general average for India. A very large proportion of it falls between the middle of October and the middle of December.

As I consider the Black Town farm to be a fair model for an Indian sewage farm, I shall describe it somewhat in detail. The sewage passes from the outfall channel through culverts with sluices into the main carriers. These are banks of earth with a channel scooped out on the top. They run in parallel lines about 432 feet apart, giving off at right angles, the secondary or distributing carriers, which are similar but somewhat smaller. The interval between the distributing carriers is 114 feet, and it is divided into two by a small bund, which runs through the beds half way between them. This may be called the central bund. The beds slope down to it from the distributing carriers. It is absent in some of the farms, but I think it is a good thing to have it, as the grass may rot at the lowest part of the slope through the water standing there longest. It percolates through the bund, and so this is avoided. There are further bunds at intervals of 6 to 8 feet running from near the distributing carriers down to the central bund. These are small and not more than 4 to 6 inches in height. They conduce to the equal distribution of the sewage over the grass. The junction of a distributing carrier with a main, is made with a stone-ware drain pipe of about 6 inches diameter. Grass grows freely over the bunds and over the carriers to the very edge of the channels, which become coated with a black sludge, which hinders the sewage from sinking in, though it allows enough percolation to keep the grass growing freely over them. Large drain tiles have been laid in some of the carriers, but they soon get displaced and serve no good purpose. The gradient of the carriers should be sufficient to ensure a fairly rapid flow without causing a scour. Where the amount of sewage to be disposed of is small, the beds should be made somewhat smaller than the measurements I have given, in order to

get even distribution. The slope from the distributing carrier to the central bund is about 1 in 32.

The system of irrigation, which has been found to answer best, is to flood the beds heavily every 3 or 4 days, though it can be done oftener without any ill effect. The method employed is to open the sluice in the outfall channel and let the sewage run into a main carrier. The drain pipes leading to the distributors to be used are left open; those which are not to be used are closed with earth and grass. If only the first part of a main carrier is required, it can be banded across at the required distance with earth. The same can be done with a distributor, which is then breached behind the barrier, and the sewage pours out and runs down the space between the distributor and the ends of the bunds that divide up the beds, and turns off between these bunds to run down the beds to the central bund. The men in charge of the farms say that they put on about 4 inches at a time, but the amount must be much larger, as a good deal of sewage sinks in before it begins to lie on the surface. This method of intermittent irrigation economises the labor on a large farm, as only a third or a quarter of it has to be attended to every day. It also gives plenty of time for air to be drawn into the interstices of the soil and provide the oxygen which is necessary both for nitrification and the formation of tissue. Most cultivators irrigate equally all the time a crop is growing, but one of great experience told me that the younger the grass the more sewage it would take. The grass should not be irrigated for 2 or 3 days before it is cut. This allows it to harden, and though it does not weigh quite so much, its quality is better and it does not wither so quickly. After the grass is cut, which is done in Madras with a sickle with a saw edge, the teeth being set the contrary way to an English saw, the ground should lie fallow for the best part of a week. The careful farmer will then take the opportunity of forking it and loosening the roots, though in some farms this is not done more than once a year. It favors the development of young roots to replace the old ones, and so preserves a healthy and vigorous growth. The beds should also be weeded. If this is done regularly, it entails very little labor, but if it is neglected, there may be some difficulty experienced. The grass is generally cut rather before it reaches maturity. The contractor reckons to cut a crop every 45 days which gives 8 crops a year. In the Municipal parks, where sewage irrigation is carried on, we do not get quite so many. The method of irrigation by blocking the channels with earth and breaching them is primitive, but it suits the native cultivator, who is very skilful with it, and it has been found to answer the purpose, so no attempt has been made to supersede it and introduce iron or wooden stoppers.

Some of the three million gallons of sewage daily pumped at the Royapuram Station is drawn off to irrigate the Robinson Park, the remainder goes to the Black Town farms. Adding together the area of the Park, the farm, and of certain private lands adjoining the farm, which are irrigated by the contractor, we get a total of 40 acres approximately. This gives a daily average of 75,000 gallons per acre. The experience of the Berlin farms is, that not more than 2,000 to 3,000 gallons of daily sewage should be allotted per acre, so that the land may

and the necessary periods of rest. At the Bedford farm in England, about 5,000 gallons per acre are pumped daily, and at the Biddington farm about 6,000 gallons, which is the largest amount I know of outside Madras. Yet the Madras contractor, who is getting 12 times as much sewage per acre as any European farm would stand, recently petitioned to have sewage irrigation stopped in the Robinson Park on the ground that he was not getting enough. This is a remarkable testimony to the porosity of the soil and the copious evaporation and transpiration that take place under the influence of the Indian sun. At times when I have visited the farm, especially after heavy rain, all the sewage was not being used, the surplus running into the sea at a point beyond the farm. The sewage which is used to irrigate the farm does not form a definite effluent, but on careful examination I have found tiny rivulets trickling down from near the bottom of the wall of sand in which the farm ends, where it drops down to join the sea shore. The amount is so small that it was a long time before I noticed it.

As regards the crops that do best, though it has been found that nearly everything will grow under sewage irrigation, later experience has confirmed the verdict of the early experimenters in Madras, that *hariali* grass (*Cynodon Dactylon*, Hind: *Dhool*) is by far the most satisfactory. It has the advantage of being indigenous; for English and French experience has shewn that the peculiar crop, whatever it may be, that suits the neighbourhood, seems to flourish under sewage. It is, moreover, a voracious feeder, and is not easily killed by excess of sewage. In the wild state in places where there is not much moisture, it creeps for the most part below the surface of the ground. Native ponies may be seen scraping the surface of the ground with their hoofs and blowing away the dust to get at it, and will graze where there is not a blade of green grass to be seen. But, when abundantly irrigated, it shoots up to a height of 2 feet or more and yields most luxuriant crops. CAPTAIN HORACE HAYES, F.R.C.V.S., says of it in his book on "Horse Management in India": "In good soil, when cultivated, it loses its creeping character and grows like English meadow grass, to which I think it is much superior." A good farm yields about 45 tons of green grass per acre, which dries down to about 15 tons of hay. This compares very favorably with the Berlin farms, which yield 25 tons of grass or 5 tons of hay. From this it would appear that the grass grown in Madras contains less water than that grown in Germany. The English sewage farms yield about the same amount of hay as the German ones. This is about double the yield from English meadow land. So, where we get one ton of hay from meadow land, we get two tons from European sewage farm and 6 tons from Madras sewage farms. This enormous difference may partly be attributed to the season of growth being continuous in India, whereas in Europe, it is limited to the summer months, and partly to the fact that a high temperature in a soil or water up to 99° Fahr., increases the activity of nitrification and consequently of vegetable growth. The hay from the Madras farms is mostly sold to the Commissariat at Rs. 45 arcon. This gives an average money yield of Rs. 0.75, or about 237 sterling, per acre, taking Rs. 18 to the pound, against £38 per acre, which is reported to be

the average price of Italian rye grass grown on the Bedford sewage farm. When the differences in the cost of land and labor in the two countries are taken into account, it is easily seen how it comes to pass that sewage farming is so much more profitable in India than in England, for we have double the produce on probably less than a quarter of the outlay. Besides, the supply of hay to the Commissariat there is a fair market for grass, and hay among horse owners in the city, especially during the hot weather when grass is scarce.

With regard to the quality of our sewage farm hay as forage I wrote to Veterinary Major W. GLANVILLE, V.D., the officer in charge of the horses of H. H. the Governor's Body Guard, and the Royal Artillery at Saint Thomas' Mount, who replied:—

"Since hay from the sewage farms has been used at the Mount, there has not been a single case of anthrax until this year, when on inquiry I found that one of the Majors was using grass-cutters' grass. This was stopped and since then we have not had a case. The same in the Body Guard. I strongly recommend hay from the sewage farms, as diseased cattle are not allowed to stray over the land, and it is by far the best forage you can get in Madras. Veterinary Colonel J. S. SHAW says that wherever dry hay has been used, anthrax has not been known, and certainly I have not seen a case. In Belgium in 1878 we had anthrax, and as soon as the grass-cutters were discharged it ceased, and has not recurred since. The same in Bangalore, except when they are compelled to use green grass, as in camps of exercise, etc. So I believe the drying-process and keeping diseased cattle off the land has a great deal to do with this immunity."

Other Veterinary Surgeons with whom I have discussed the matter have spoken equally in favor of sewage farm hay.

Hariali grass grows better from roots than from seed. The roots should be planted in rows about 6 inches apart. It spreads quickly and in about two months a light crop can be cut. If it is planted in a soil recently made by the deposit of rubbish, the irrigation should be somewhat excessive, daily will not be too often. Otherwise the heat due to fermentation may kill the grass. It is advisable to let rubbish rest for six months or more before planting it, otherwise the level of the beds may be thrown out through its sinking irregularly. After planting, if the beds keep their level, there is nothing further to be done beyond weeding and forking. Beds both of sand and of made soil, planted more than 20 years ago, are still yielding good crops, though so far as I know, they have never been ploughed up or replanted. If a bed sinks in any part a few cart loads of rubbish will restore the level. If caterpillars appear, as they occasionally do about the end of the rainy season, a little freshly-slaked lime will quickly put an end to them. Turning which, *salas* are as good as anything.

About 50 acres of land are leased to a contractor. The amount was larger, but two farms have been abolished as the sewage supplied to them was carried to the Black Town farm after the opening of No. 2 sewer, and a considerable portion of the Black Town farm was carried away last year by the sea. Eleven acres more are being acquired, to be added to the Black Town farm. The contractor also

to extend the farms, rather than to increase the effluent by underdrainage. The drains leading to the Napier Park and People's Park, have overflowed into the Cooum, by which sewage enters the river at night, when the pumps are at rest, or during heavy rains. So have the drains leading to two small peotah farms, Pudupet and Dam's Road. It is proposed to introduce storage tanks to intercept the sewage that now escapes into the river, which is inconsiderable in amount. I do not know what is referred to by disposal by soakage. In some parts of the town there is soakage, but this is due to the want of proper drains and not to sewage-farming on bad sanitary principles. Sewage-farming can only be held responsible for the disposal of sewage when it reaches its destination, and not for defects in the sewage and drainage of a town.

The price paid for land for sewage-farming in Madras has not been high; and from what I have seen of other Indian towns, I believe that cheap land suitable for the purpose would generally be procurable. In the Madras farms there are practically only two types of soil, sand and made soil. They are both porous in a high degree and to about an equal extent. To test their porosity and their purifying action on sewage, I recently performed some simple experiments. I had four filters or gauges made, each consisting of three 9-inch drain pipes joined together and cemented so as to form impervious cylinders rather more than 6 feet in length. These were placed perpendicularly on wooden stands with perforated iron plates intervening, and galvanized iron buckets placed underneath. Two of these I filled with earth from the Robinson Park and the other two with sand from the Black Town farms, first putting a few pebbles and pieces of broken pot at the bottom. On the top I put grass from the farms, partly, as I believed it would act as a strainer, partly in order to obtain any action the roots might have upon the sewage as it passed over them, and generally to reproduce as nearly as possible, the natural conditions of a farm. The soil of the Robinson Park was originally street-sweepings; it is now a rich and friable loam of a dark brown color. The soil of the Black Town farm was originally sea-sand, and as far as its physical characters are concerned, it has practically undergone no alteration, though subjected to sewage irrigation for over a decade. I put sewage in at the top and caught the effluent water in the buckets at the bottom. The time taken by the sewage to pass through varied somewhat, its first appearance being in 2 to 3 hours, when the soil was comparatively dry and $\frac{1}{2}$ to 1 hour when it was fairly moist at the time of starting the experiment. It passed through the made soil quite as quickly as through the sand, which was contrary to expectation. I began by putting 2 gallons of sewage, pint by pint, into each filter. About half of it was absorbed by the soil almost immediately, the remainder stood on the surface and percolated down much more gradually. As soon as it began to come through the first filter, I added a gallon more to each in order to get enough effluent for analysis. I sent samples of the sewage used, which was taken from the well in the Royapuram Pumping Station and of the effluents to Surgeon-Major J. L. VAN GUYZEN, M.B., F.C.S., etc. Chemical Examiner to

Government, who very kindly analysed them for me. The following are the results of his analysis:—

| Analysis Parts per 100,000. | | SUSPENDED SOLIDS. | | | | DISSOLVED SOLIDS. | | | | Chlorine. | Free ammonia. | Albuminoid ammonia. | Nitric acid. |
|-----------------------------|-------------------------------------------------------------------------------|-------------------|------------|--------|----------|-------------------|----------|----------|------------|-----------|---------------|---------------------|--------------|
| | | Organic. | Inorganic. | Total. | Organic. | Inorganic. | Total. | Organic. | Inorganic. | | | | |
| | Filtered effluent sandy soil, from Black Town Sewage Farm ... | 0.100 | 1.600 | 1.700 | 205.000 | 555.000 | 760.000 | 269.800 | 0.220 | 8.670 | 0.560 | 0.210 | |
| | Sewage from Royapuram Pumping Station ... | 12.700 | 19.700 | 32.400 | 66.000 | 299.000 | 365.000 | 170.400 | 5.200 | | | | |
| | Filtered effluent (No. 1 Filter) made soil from Robinson Park Sewage Farm ... | Trace | 0.200 | 0.200 | 117.000 | 1304.000 | 1421.000 | 138.400 | 0.024 | 16.920 | 0.056 | 0.084 | |
| | Filtered effluent (No. 2 Filter) made soil from Robinson Park Sewage Farm ... | Trace | 0.400 | 0.400 | 105.000 | 280.000 | 385.000 | 120.700 | 0.019 | 16.500 | 0.084 | 0.084 | |

The character or source of the organic matter cannot well be inferred from the above analysis in the absence of determinations of the amount of organic carbon and nitrogen present. Owing to the short space of time unavoidably allowed to the analyst, these determinations had to be omitted. The filtration performed in the experiments was necessarily imperfect. The soil in the filters was much less compact than that in the farms, where it had been rained upon and irrigated for years. If I had the means available of isolating sections of the farms without disturbing the soil and had been able to utilize a larger area in proportion to the sewage used, I believe that the effluents obtained would have been purer. The sewage put on, 2 gallons to an area of 63.6 square inches, is equivalent to 591,750 gallons an acre, which is seven times as much as the average daily amount used on the Black Town farm or more than twice the amount used at a flooding done every

three days. The sample of sewage analysed contained rather less suspended matters and free ammonia, much less combined ammonia and much more matter in solution and chlorine than are contained in English sewage of average composition. At the same time the results obtained amply demonstrate the purifying powers of the soil and are in the main in accordance with the results of English experiments. The effluent water was clear, odourless and practically colorless. The analyses shew that it contains less suspended organic impurities and much less free and albuminoid ammonia than the subsoil water in parts of Black Town of which I have analysed. It would so far pass the standards of purity adopted by the Commissioners appointed to inquire into the best means of preventing the pollution of rivers. The most noteworthy point, whether from the point of view of the sanitarian or of the agriculturist, is the retention by the soil of the suspended organic matter and ammonia in solution and the appearance in the effluent of nitrates. According to modern theories based on the experiments of M. M. SCHLESING and MENTZ and MENNIS, LAWES, GILBERT and WARRINGTON, this is due to nitrification brought about by the presence of living organisms, which specially occupy the first 18 inches of the top soil. The vital activity of these living ferments varies with the temperature, being very low near freezing point and reaching its maximum at 99° Fahr. I have not got reliable records of soil temperatures in Madras, but a few days ago (early in November) I took some temperatures of the soil on the Black Town farm in the early morning, which were over 80° Fahr., so that it is probably between 80° and 100°F generally, which is the most favorable temperature for the process, and so in the highest degree conducive to the purification of sewage. In a paper read before the Society of Arts in 1882, Mr. WARRINGTON pointed out that "a filtering medium of pure sand and limestone, treated intermittently with sewage, will after a time display considerable purifying powers, the surfaces becoming covered with oxidising organisms derived from the sewage. No such medium will, however, equal in effect a porous soil, rich in organic life." This explains what might seem strange in the results of the analysis, that the effluent from the made soil contains much less unoxidised nitrogen than that from the sand. The experiments of the rivers pollution commissioners with soils from different farms appear to shew that the cleansing power of a soil is more closely connected with physical conditions as regards porosity and fineness of division than with its chemical composition, and of two soils not differing very widely in chemical composition, namely Haulbrook and Dursley, one (the latter) was found to have twice the purifying power of the other. Judging from my experiments, it would appear that made soil, which is the finer and richer of the two, had a greater purifying power than sand, and, as the porosity is about equal, though both are admirably suited for sewage farming, where both were available made soil should be taken by preference, or sand might be covered with sweepings to a height of one or two feet to give it a more active nitrifying surface stratum. Presumably the nitrates in the effluent were in the soil when it was taken from the farm, and were the result of former nitrification, and not produced from the organic matter and ammonia in the

sewage used in the experiments. The large amount of chlorides is probably due partly to the urine contained in the sewage and partly to the proximity of the sea. The amount in the effluent from the Black Town farm soil, which was taken from a spot about 300 yards from the sea shore, was more than double that of the Robinson Park, which is more than half a mile from the sea. These experiments, imperfect as they were, and the analyses made by Dr. VAN GEYVEL convince me that the effluent percolates through our farms may safely be allowed to join the subsoil water without any fear of polluting it or in any way endangering the public health. I have already shewn good reason for believing that there is not very much of it, that the water level is not appreciably raised, and that the crops are healthy and vigorous. Hence, so far as I can see, no reason exists for underdrainage, which would, moreover, entail great difficulties and expense; for the ground is in many of the farms so level, that the effluent would not run off, so that it would have to be pumped, and there would be nowhere for it to go to, unless it were thrown on to the beds again, and so be sent round and round in a vicious circle.

Under the arrangement with the sewage farm contractor, the Municipal Commissioners undertake to pay the rent, establishment and labor. The contractor must keep in repair the sewers, drains, cisterns, channel-pipes and other things connected with the delivery of sewage in or on the farms. He must dispose of as much sewage on the land as the commissioners deliver. He must cultivate and manage the farms in the most approved manner and keep them in a clean condition, free from weeds, &c. He must allow free access to the farms to the officers and servants of the Municipality, in order that they may see in what state the farms are kept, and whether any part is in need of repair, and, if so, to give notice to the lessee, who must execute the repairs within fifteen days. The contractor has the right of constructing new wells, cisterns, &c., if he first obtains consent for the proposed work. The Commissioners agree not to stop the delivery of sewage at any one time for a longer period than five days. The contractor is allowed to cultivate or irrigate with sewage other land than Municipal land with the consent of the President, and pays to the Commissioners Rs. 250 per cawne (1 cawne = 1.322 acres) per annum for lands so cultivated. The contractor has to cultivate and irrigate any other land acquired, rented, or handed over to the Municipality, and pays the Commissioners Rs. 300 per cawne per annum for lands so cultivated. The contractor makes a deposit of a Government of India promissory note for Rs. 4,750 as security. Deductions may be made from this in the event of a breach of contract.

The contract system, which was introduced in 1888, has been found to be more profitable than working the farms departmentally. The usual objection to it is that a contractor has an eye only to profit, and will not use all the sewage on the farms for fear of injuring his crops. No trouble has been experienced from this cause in Madras, partly through the voracity of barials and partly through the well-known prodigality of the Indian cultivator in the matter of irrigation. One contractor allowed weeds and objectionable kinds of grass to gain ground, especially a kind of swamp-grass with strong interlacing roots. (Pres-

These farms have gained a field in the D'ARZELLER'S Sewage Farm and to a less extent cow-grass (Chloris barbata).

The farms are put up to public auction triennially. At the last sale in 1893 Rs. 7,250 per annum, or Rs. 21,750 for the whole period, was the highest bid. On this, if the cost of pumping on the farms be included, there was a loss on the three years as shown below :

| Income— | Rs. As. P. | Expenditure— | Rs. As. P. |
|------------------|-------------|------------------------------|-------------|
| Rent of farms .. | 21,750 0 0 | Establishment .. | 1,920 1 9 |
| | | Overtime .. | 128 10 8 |
| | | Fitters Staff .. | 721 1 8 |
| | | Labor (including pumping) .. | 35,414 5 10 |
| Loss .. | 19,239 11 6 | Rent of sewage farms .. | 2,789 8 6 |
| Total .. | 40,989 11 0 | Total .. | 40,989 11 0 |

This shows a loss of Rs. 19,239-11-6, or rather more than Rs. 6,000 a year. In 1891 the better price of Rs. 15,000 per annum, or Rs. 45,000 for the three years, was obtained. On this an actual profit of Rs. 18,807 was realised; the expenditure having been somewhat reduced. In 1894 the farms were let for Rs. 19,000 per annum or Rs. 57,000 for three years. The following is an estimate of the income and expenditure for the period :—

| Income— | Rs. As. P. | Expenditure— | Rs. As. P. |
|--------------------------|------------|---------------------------|------------|
| Rent of farms .. | 57,000 0 0 | Rent, maintenance, &c. .. | 30,630 0 0 |
| Private land .. | 14,860 0 0 | Profit .. | 46,532 0 0 |
| Added land (2½ years) .. | 5,312 0 0 | | |
| Total Rs. .. | 77,162 0 0 | Total Rs. .. | 77,162 0 0 |

The estimated profit for the period is thus seen to amount to Rs. 46,532.

The conclusions I draw from the evidence adduced are as follows :—

1. Barren land can be acquired at a moderate cost in the vicinity of most Indian towns.
2. No matter how barren the land is, if it is permeable it can be utilised for the formation of sewage farms.
3. Sewage farms in India can be laid out at small cost, a mistry with a gang of coolies being able to do the grading of the beds and make the bunds and channels.
4. Owing to growth being continuous, more crops can be raised in India than in Europe, and sewage can be more satisfactorily disposed of in very large quantities throughout the year.
5. Owing to the temperature of the soil being particularly favorable to nitrification and growth in the presence of sufficient water, the crops are very heavy.
6. Owing to the scarcity of good forage during a great part of the year, there is usually a good market for grass and hay.
7. Owing to the exclusion of diseased cattle from the farms, the grass is not liable to infection with disease germs. The hay compares favorably as a food stuff with forage from other sources.
8. Sewage-farming can be carried on in the proximity of houses without affecting the health of the residents, though it is better to locate the farms at a distance from a town as there may be some nuisance from the sewage wells and main carriers owing to the decomposition of the sewage before it reaches the farms.
9. Owing to the purity of the ground and the enormous volumes of water given off by evaporation and transpiration, underdraining is not generally necessary, though it may be in particular cases.

10. Sewage after passing through the ground is sufficiently purified to be admitted in a river, or to join the subsoil water without causing pollution.

11. The native cultivator is quite capable of laying out farms and carrying on sewage cultivation without close European supervision. He is an adept at irrigation processes, having inherited his aptitude and familiarised himself with the methods almost from the time of his birth.

12. The system is suitable to parts of India where the ground is permeable and the rainfall is not excessive. It can be carried on profitably even where the flatness of the land necessitates the use of pumps, and should yield a much higher profit where the natural slope of the land permits them to be dispensed with.

THE NECESSITY FOR AN ACT RESTRICTING THE FREE SALE OF POISONS IN BENGAL.

BY SURGEON-CADET J. F. EVANS, M.B.,

and

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Chemical Examiner to the Government of Bengal.

(Continued from page 247, Vol. VIII.)

2. PROPOSITION NOW UNDER DISCUSSION.

The measures we propose may be summarised as follows :—

- (a). An Arsenic Act.
- (b). The amendment of those sections of the Bengal Municipal Act and Calcutta Municipal Consolidation Act which relate to the sale of drugs.
- (c). The amendment of those sections of the Opium Act I of 1878 which relate to the retail sale of opium.

(a.) THE ARSENIC ACT.

Import of arsenic.—As already stated, the arsenic in India is almost entirely imported into the country.

By the courtesy of Mr. C. A. SAMUELS, Officiating Collector of Customs, Calcutta, we are enabled to furnish the following statement shewing the imports and exports of arsenic at the Port of Calcutta during the last twelve years :

TABLE V.

Statement shewing the quantities of Arsenic imported and exported into and from Calcutta, in the Foreign Trade, during the official years from 1882-83 to 1893-94.

| Countries whence imported from and whither exported to | 1883-84 | 1884-85 | 1885-86 | 1886-87 | 1887-88 |
|--------------------------------------------------------|---------|---------|---------|---------|---------|
| | cwt. | cwt. | cwt. | cwt. | cwt. |
| IMPORTS. | | | | | |
| From United Kingdom | 669 | 120 | 546 | 427 | 77 |
| Germany, Hamburg | 10 | 27 | 15 | 12 | 7 |
| China Hong-kong | 30 | 108 | 448 | 18 | 43 |
| Netherlands | 2 | 2 | 2 | 2 | 2 |
| Australia Victoria | | | | | |
| Total | 727 | 277 | 989 | 461 | 139 |
| EXPORTS. | | | | | |
| To Ceylon | | 13 | 10 | 17 | |
| Java | | 31 | 74 | 178 | 160 |
| Netherlands | | | | | |
| Total | 226 | 47 | 84 | 195 | 160 |

| Countries whence imported from and whither exported to | 1888-89 | 1890-91 | 1900-01 | 1901-02 | 1902-03 | 1903-04 |
|--------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
| | cwt. | cwt. | cwt. | cwt. | cwt. | cwt. |
| IMPORTS. | | | | | | |
| From United Kingdom | 242 | 253 | 402 | 255 | 522 | 330 |
| .. Germany, Hambury | .. | .. | 30 | .. | 11 | 127 |
| .. China Hong-kong | 21 | 41 | 88 | 53 | 16 | 113 |
| .. Straits Settlements | 102 | 289 | 20 | 192 | 295 | 205 |
| .. Australia Victoria | .. | .. | .. | .. | .. | .. |
| Total .. | 426 | 593 | 540 | 500 | 845 | 785 |
| EXPORTS. | | | | | | |
| To Ceylon | .. | .. | .. | .. | .. | 6 |
| .. Java | .. | .. | .. | .. | .. | .. |
| .. Straits Settlements | 154 | 119 | .. | 105 | 60 | 127 |
| Total .. | 154 | 119 | .. | 105 | 60 | 133 |

From the statement it will be seen that a very considerable quantity of *arsenic* remains in the country.

Last year the quantity was 30 tons. The fatal dose of *arsenic* for an adult is 2 grains. How then, some might say, is the poisoning by *arsenic* to be prevented, when it is such a deadly drug and when such large quantities are annually imported? But 30 tons is a small quantity compared with the 2,875 tons which constitute the average annual output of *white arsenic* at the tin works of Tavistock in Cornwall; yet fatal *arsenic* poisoning of a criminal kind is not as a consequence, frequent in the neighbourhood of Tavistock.

Uses of arsenic for trade and manufacturing purposes.—The larger portion of the *arsenic* imported into India is used in trade such as the cleansing and preparation of hides, paper, paint, wooden posts, &c., and occasionally also for agricultural purposes. The yellow variety of *arsenic* which contains from 20 to 30 per cent. of *white arsenic* is used as a pigment and largely as a depilatory.

Proposed regulations of the sale of arsenic.—Without presuming that the proposition is complete and free from defect or couched in the proper legal phraseology, the regulations of the sale of *arsenic* which we would propose take the following shape:—

Persons authorized to grant license.—That certain individuals or officials shall be entrusted by Government with the duty of granting licenses for the import, sale, purchase and possession of *arsenic* after having ascertained to their satisfaction that the applicants for such licenses are fit and proper persons to be granted the same.

General conditions of sale or purchase.—That no *arsenic* or *arsenical* preparation recognised as a poison shall be bought or sold without a license, except on the prescription of a licensed medical man, with certain exceptions relating to the practice of indigenous medicine to be hereafter specified.

Conditions regulating import of arsenic.—That persons desiring to import *arsenic* into the country must obtain a license authorizing its import, and must undertake to keep the *arsenic* in safe custody and to sell it only to persons producing a license authorizing them to purchase *arsenic*, all such sales being registered with an entry of the date, the quantity, sold and the name and address of the purchaser.

Conditions regulating wholesale or retail sale of arsenic.

—That dealers in *arsenic*, whether wholesale or retail, must obtain a license authorizing them to buy, sell and possess *arsenic*, that they must undertake to buy from and sell to licensed persons only and to carry on their business generally under the same conditions as the importers, except in so far as its sale on medical prescription is concerned.

Conditions regulating sale or purchase of arsenic for trade and manufacturing purposes.—That persons requiring *arsenic* for manufacturing and other purposes not being those of sale, retail or otherwise, must obtain a license authorizing them to buy and possess *arsenic* for such purposes and must be prepared to satisfy the licensing authorities that they are fit and proper persons to be entrusted with the possession of *arsenic*, and that they are in a position to make suitable provisions for its safe custody both during use and at other times.

Special provisions for practitioners of indigenous medicine.—That in rural districts, and where necessary in towns, the practitioners of indigenous medicine, if of good character, may be licensed to buy and possess a limited quantity of *arsenic* only in each year, and to dispense the same to their patients.

Precautions in certain cases.—That pounded *white arsenic*, except in special cases hereafter to be determined, be sold mixed with soot or indigo in the proportion of one ounce to each pound of *arsenic*.

(b.) AMENDMENT OF THOSE SECTIONS OF THE BENGAL MUNICIPAL ACT AND CALCUTTA MUNICIPAL CONSOLIDATION ACT WHICH RELATE TO THE SALE OF DRUGS.

Poisons within the meaning of the Act.—That the drugs named in the following lists to be known as Schedule A European Poisons and Schedule B Indian poisons be considered as poisons for the purposes of the Act:—

SCHEDULE A.

European Poisons.

1. Arsenic and its preparations.
2. Mercury and its preparations.
3. Antimonial preparations.
4. Strong ammonia.
5. Strong acids such as concentrated nitric, sulphuric, hydrochloric and oxalic.
6. Phosphorus.
7. Hydrocyanic acid and cyanides.
8. Opium, its alkaloids and preparations.
9. Belladonna, *datura*, *Hyocyamus*, their alkaloids and preparations.
10. *Nux vomica*, its alkaloids and preparations.
11. Aconite, its alkaloids and preparations.
12. Hydrate of chloral.
13. Chloroform.
14. Carbolic acid.
15. Cantharides and its preparations.

SCHEDULE B.

Indian Poisons.

1. White arsenic (*senko*, *semlukhar*.)
2. Red arsenic or realgar (*monchal*.)
3. Yellow arsenic or orpiment (*harital*.)
4. Corrosive sublimate (*ras-karpura*.)
5. Aconite (*mitabish*.)
6. Datura.
7. *Hyocyamus* (*klhoru-sani njwan*.)
8. *Nux vomica* bark or seed (*kuchila*.)
9. *Plumbago rosea* (*lal-chitra*.)
10. Croton seeds (*Jaipal*.)
11. Yellow oleander (*kolika*.)
12. *Cocculus Indicus* (*kakmari*.)
13. *Nerium odoratum* (*karubi*.)

Granting of license.—That in the same manner as suggested by the sale of arsenic, licenses be granted for the sale and possession of poisons.

Quantity of purchase or sale of poisons.—That except under certain conditions and in certain quantities to be specified in each case, no poison within the meaning of the act shall be bought or sold without a license except on the prescription of a licensed medical man.

Conditions of sale.—That persons engaged in the merchandise of poisons as defined by the Act must obtain a license authorizing them to carry on such business, and must undertake to conform with the provisions of the Act and not to sell poison in any quantity larger than that permitted for its retail sale other than to duly licensed individuals, except on medical prescription.

Registration of the sale.—That every sale of poisons except on medical prescription with certain exceptions relative to the practice of indigenous medicine must be duly registered in the following manner:—

- (a). Name of purchaser.
- (b). Residence of purchaser.
- (c). Object of purchase.
- (d). Authority for sale.
- (e). Quantity sold.
- (f). Date of sale.
- (g). Signature of the seller.
- (h). Signature of the purchaser.

Qualifications of persons permitted to buy and possess poisons.—That no person shall be permitted to buy and possess poisons who is unacquainted with their nature, and is not in a position to make proper arrangements for their safe custody and sale.

Proper labelling and custody of poisons.—That in the shops of individuals licensed to sell poison, the poisons are to be properly labelled with the name of the poison and the printed word POISON both in English and vernacular, and kept apart from other articles of merchandise.

Special provisions for practitioners of indigenous medicine.—That in rural districts and where necessary in towns, practitioners of indigenous medicine, if of good character, may be licensed to buy and possess and dispense to their patients limited quantities of the poisons included in Schedule B.

Registration of medical practitioners.—That all practitioners of medicine licensed to prescribe or dispense poison be registered.

Conditions regarding purchase for trade and manufacturing purposes.—That the same regulations should apply to persons requiring poisons for manufacturing and other purposes not being those of sale, as were recommended in the case of arsenic.

Special provisions for the sale or purchase of poisons for domestic purposes.—That it may be advisable to permit a limited retail sale of certain of the poisons included in the Schedules for domestic and other purposes, and that the drugs which may be sold, the quantities to be sold, and the manner of the sale be hereafter determined.

Patent and proprietary medicines.—That all patent and proprietary medicines, if found to contain poison within the meaning of the Act, come within the operation of its provisions.

(d). AMENDMENT OF THOSE CLAUSES OF THE BOARD'S EXCISE OPIMUM FORM NO. 1 WHICH RELATE TO THE RETAIL SALE OF OPIMUM.

Present limit to retail sale.—At the present time the largest quantity of opium that may be purchased from an opium vendor on one occasion by any single individual not being a licensed druggist or licensed vendor of opium, or of an intoxicating drug is five tola or two ounces.

This quantity is fixed by the Board's Excise Opium form No. 1 as the extreme limit of retail sale.

Two ounces of Indian opium is sufficient to poison from 15 to 20 individuals, provided that they are not opium-eaters.

Attention has already been drawn to the disastrous results of this system. The largeness of the quantity selected as the limit of the retail sale, was no doubt due to the wish of the authorities to interfere as little as possible with the requirements of the opium-eater, and with the use of opium as a domestic medicine.

Proposed limit to retail sale.—If the extreme limit of the retail sale of opium were fixed at $\frac{1}{4}$ th tola or about 20 grains, no interference with its use as a domestic medicine would arise, as this quantity represents from 20 to 40 ordinary medicinal doses. 20 grains is, however, for an adult less than the minimum fatal dose of Indian opium, which is much less potent (five times less at least) than Turkey opium.

Such a limit would also satisfy the requirements of a very large number of opium-eaters. The daily dose of opium eaten at the commencement of the habit is about $\frac{1}{2}$ grain, a quantity which, as is well known, undergoes gradual increase until a very much larger amount, even 100 grains daily, is ingested.

But a very considerable proportion of pronounced opium-eaters never exceed 15 to 20 grains per diem, and endeavour to subdue the craving for a larger quantity.

The question now naturally arises as to how and where, if the retail limit be fixed at 20 grains, is the opium-eater, whose daily dose exceeds this quantity, to get his daily supply?

The answer is a simple one. Either the opium-eater must be exposed to a trifling inconvenience in order to get the quantity he requires, or the danger to the general community at present existing must continue.

At the present time opium-eating is not to be regarded as a vice in any sense of the term, but only as a habit, the excessive gratification of which engenders very serious dangers to the community at large, if it requires that large and fatal doses of opium must be sold without restriction.

It is not too much to require of the opium-eater, whose daily dose has exceeded the retail limit, that he should provide himself with a certificate to that effect signed by a medical man or a respectable individual, such as the head man of his village. We would suggest that such certificates should state the daily dose required, and should be valid for one year only, and that the opium vendor on the presentation of a certificate of this kind should be authorized to sell the quantity intimated therein, provided it does not exceed five tola.

* That he do not, except to a vendor of opium or of an intoxicating drug licensed by the Collector, or to a licensed druggist, sell more than five tola of opium to any person at one time.

The proposed amendment of the Board's Excise Opium form No. 1 is accordingly as follows:—

That he do not except to a vendor of opium or of an intoxicating drug licensed by the Collector, or to a licensed druggist sell more than ½th tola of opium to any person at one time, except on the production of a certificate stating that the purchaser is an opium-eater, signed by a licensed practitioner of medicine, or a respectable resident of the locality when the quantity specified in the certificate provided it does not exceed five tolas in weight, may be sold.

All sales exceeding ½th tola to be entered in a special printed record giving in addition to the information required in para. XIV^o of form No. 1, the name and residence of the purchaser, the authority for the sale and the quantity sold.

3. DIFFICULTIES ATTENDING THE INTRODUCTION AND WORKING OF SUCH A MEASURE.

Numerous objections suggest themselves, therefore it may be as well first to enumerate those which appear most important, and then subsequently deal with them in detail.

The following are the objections which will be considered:—

(a). That no practical decrease in poisoning will result by imposing restrictions on the sale of certain poisons, while others being indigenous to the country must perforce remain easily accessible.

(b). That any change which may arise from the proposed measures will be distinctly a change for the worse, on the ground that vegetable poisons will, after the enactment of such measures be utilised to a greater extent than at present, and that such poisons are more difficult of detection than the mineral poisons now in use.

(c). That the proposed measures would necessitate an undesirable amount of interference with the domestic habits and customs of the people of the country.

(d). That they would interfere with the practice of indigenous medicine, and thereby deprive the people in many districts even of the small amount of medical aid which they can obtain at the present time.

(e). That measures of the kind proposed would interfere with trade and many useful economic practices.

Is the supposed impracticability of bringing about a decrease in poisoning correct?—Without attempting to raise the question whether the policy of temporizing with an admitted evil is correct, we would at once ask, what are the poisons which may be expected to take the place of arsenic, nuxia, opium, and other controllable poisons if these are rendered more or less inaccessible? If any such exist, they must naturally be sought among the indigenous drugs of the country, which belong for the most part to the vegetable kingdom.

That the country has many vegetable products endowed with poisonous properties, is easily learned by reference to the Pharmacographia Indica written by DICKSON, HOOPER and WARDEN. Fortunately, however, the knowledge of the poisonous properties of the majority of these substances is not yet by any means popular. They may

in consequence be considered rather as potential than actual poisons at the present time so far as the public generally are concerned.

| Date. | Quantity of Opium as submitted stores yesterday. | Quantity received this day. | Total Quantity submitted for. | Quantity sold this day. | Quantity remaining in store. |
|----------|--------------------------------------------------|-----------------------------|-------------------------------|-------------------------|------------------------------|
| M. S. C. | M. S. C. | M. S. C. | M. S. C. | M. S. C. | M. S. C. |
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As judged from general information and from all the cases of poisoning which are reported, the number of indigenous vegetable poisons commonly known is very small. The following are the chief:—

| | |
|----------|--------------------|
| Opium. | Nux Vomica. |
| Datura. | Oleander. |
| Aconite. | Abrus Precatorius. |

Opium heads the list, and is responsible for more fatal cases of poisoning than any other drug; but, as already shewn, its accessibility can be controlled without imposing hardship on those who require it for a legitimate purpose.

Successful interference with the possession of *datura* is apparently hopeless. Fortunately the uncertainty of its action is tolerably well recognised. It is in consequence ill-suited to the murderer's purpose, as great risk of detection would be incurred, should the poisoned man recover. The murderer does not of necessity desire to leave the locality of the murder; the robber, on the other hand, administers *datura* to assist him in the act of theft and to cover his flight with the booty.

Datura poisoning is chiefly non-fatal.

Aconite, like *arsenic*, is an imported poison, and though its introduction into the country cannot be so easily controlled as that of arsenic, yet as the channels of introduction are well-known, a feasible plan to prevent the widespread dissemination of the drug shall be practicable. The physiological symptoms set up by the chewing of even a small fragment of *aconite* root, are a bar to its frequent use as a poison, and have frequently assisted in the discovery of the poisoner.

Nux vomica trees can hardly be said to grow wild in this part of India in the same way as *datura*. They are to be found here and there, and have generally been planted for some purpose. *Nux vomica* seeds can however be readily purchased in the bazar. One seed is sufficient to poison an individual, and one tree may produce many hundreds of seeds. As *nux vomica* trees are not numerous and do not grow wild, their cultivation, except in certain recognised places and by authorised individuals, should be prohibited.

The cases of poisoning which arise from the use of *oleander* are for the most part accidental. The plant is to be found in most gardens, and like *datura* it is a poison which cannot be removed from the reach of the people. Its poisonous properties do not seem to be very widely known, and its action is somewhat uncertain.

* That he keep a daily account entered in the following form, to be submitted at the close of each day; this account to be kept in a printed account-book to be purchased at the Collector's Office:—

The *arsenic* of *arsenic* *poison* has already been *arsenic* *poison*. The fact that it requires to be introduced *arsenic* *poison* is an efficient indication as to its employment *arsenic* *poison* very limited number of cases of cattle poisoning.

There then are the poisons which have been in use for half a century and more. The accessibility of three of them viz., *opium*, *aconite* and *new venice* can effectually be controlled. *Abrus precatorius* is seldom used, and then only as a cattle poison. *Datura* and *oleander* remain, but their use (*oleander* for homicide or suicide) is rare now, for the reasons already given, and for those reasons is not likely to become more prevalent.

It is of course, very difficult, if not almost impossible, to forestall what altered conditions may bring about; but as for many years there has been practically no apparent attempt among poisoners to strike out a new line, it may reasonably be hoped that the introduction of a restricted poison sale would for several years enforce a sensible diminution in this class of crime.

It is of some interest to note that so long ago as 1843, Dr. MOUAT, then Chemical Examiner, considered that the use of vegetable poisons was on the increase, and wrote as follows:—

"The great majority of cases of the administration of poison had hitherto been arsenic. Lately, however, the exhibition of vegetable poisons has been more resorted to from its being known to *hakims* and native druggists, that while minute traces of any mineral poison can be unerringly detected, most vegetable substances defy analysis in the present state of chemical science. Some check ought to be put to the amount of murder committed in this way, unknown and unrecorded, by legislative enactment punishing all vendors of drugs in whose possession those substances are found."

Dr. MOUAT's apprehensions have however proved groundless, for Dr. WARDEN referring to this statement was able to state in 1886—

"The above was written about 40 years ago; the fear expressed that *vegetable poisons* might supplant *arsenic* has not been verified. *Arsenic* is still the homicidal and cattle-poison of India."

It will naturally be advanced that from Dr. MOUAT's time up to the present, *arsenic* has remained easily accessible, and the necessity for discovering suitable vegetable poisons has not arisen. But even should the properties of indigenous vegetable poisons become generally known, these substances could never compete with *arsenic* in fitness for the poisoner's purpose. A comparison of the properties of *arsenic* and *vegetable poisons* as a class will at once indicate the advantages which attend the use of *arsenic*.

Properties of *arsenic* and *vegetable poisons* generally:—

| ARSENIC. | VEGETABLE POISONS. |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1. Tasteless. | 1. Acrid, bitter or unpleasant taste. |
| 2. Certain in action. | 2. Uncertain in action due to the varying quantity of the active principle present in different specimens of the same plant. |

ARSENIC.

3. The fatal dose in a small quantity.
4. Stimulates in a remarkable manner the symptoms due to natural disease.

VEGETABLE POISONS.

3. To cause death, larger quantities are necessary of the majority of crude vegetable drugs.
4. Do not stimulate the symptoms of disease to anything like a corresponding extent.

The certainty of its action, its want of taste, the smallness of its fatal dose (2 to 3 grains), require no further comment. They alone would give to *arsenic* a place in the front rank of the poisoner's equipment in any country. But the similarity of its symptoms with those induced by disease, gives it in India a special value which is well illustrated by the following case:—

On October 28th 1894, a man was admitted into the Mayo Hospital, Calcutta, suffering from symptoms of choleraic diarrhoea. He arrived alone and stated that he had come from Moorshedabad by steamer, having purchased and eaten food in the bazar before leaving. He became ill on board the steamer. After admission, his symptoms were attributed by one of the medical officers to *arsenic poisoning*, but by three others who also examined the patient from time to time, he was considered to be suffering from choleraic diarrhoea. The man died on the 4th day after admission, and a *post-mortem* examination was held. The condition found, was one of general congestion of the alimentary canal with ulceration of the stomach and ecchymosis over the columnæ carneæ of the heart. Portions of the viscera were sent to the Chemical Examiner for analysis, which revealed the presence of *arsenic*.

It is legitimate to expect that many similar cases occurring in the district are returned without challenge as cases of cholera, if such a diversity of opinion can arise in a hospital provided with an experienced and expert medical staff.

We have reason to believe, as already stated, that acquaintance with the vegetable poisons of the country and knowledge of their properties are not by any means widely diffused even among the rural population. On the other hand, it is of course quite impossible to determine what the practical knowledge of *hakims* and native druggists may be as regards indigenous vegetable poisons.

In 1843, Dr. MOUAT suggested that *hakims* and native druggists were beginning to put their knowledge to a criminal use. Whether this holds good at the present time, and to what extent, we are quite unable to say.

In towns the practitioners of indigenous medicine are as a class, a respectable body of men. No doubt here and there black sheep are to be found among the *hakims* who are not over-scrupulous as to the methods in which they earn money.

But should the scheme proposed be put in force, the *hakims* will be dependent for a supply of drugs very important, if not essential, to him in his practice upon the evidence of good character and conduct which he can adduce. In future the *hakims* would possess a definite status. A recognised position and the discharge of responsible duties are often sufficient to deter criminal inclinations from the abatement or commission of crime.

Difficulties attending detection of vegetable poisons.—

Without implying that the detection of vegetable poisons is as certain as that of a mineral, it may yet be confidently stated, that the chemical methods for detecting vegetable poisons have considerably improved since the time of Dr. MOYAT's report already referred to. And though there is still room for further advance in this direction, much has been done and vegetable poisons can be detected by chemical analysis of viscera with a very considerable degree of certainty as compared with the results of fifty years ago. Should resort to indigenous vegetable poisons be stimulated by restrictive measures, it is probable that chemical research into the nature of these poisons, and the best methods of detecting them, would also be stimulated. Much has already been done in this direction by DYMCK, HOOPER and WARDEN.

Interference with customs and habits.—If the proposed measures be carefully reviewed, it will be seen that special cognizance has been taken of customs and habits, and the measure so drafted, that no undue interference with habits and customs can arise. In the measures to restrict the general sale of poisons, a special clause is introduced to legalise a small retail sale to unlicensed persons, the provisions of the clause to be hereafter determined.

Interference with the practice of indigenous medicine.—The practitioner of indigenous medicine will not be interfered with in his practice, but will be recognised and registered, will so far, as the general community are concerned, become a more important, a more responsible individual than heretofore.

Registration of all practitioners of medicine.—We are aware that the proposal to register the practitioners of the province has already been once made, and that it was abandoned on account of the difficulties of the task. We are now, however, approaching the matter from a different stand-point.

It is utterly impossible to conceive of any scheme for restricting the sale of poisons, unless a register is kept of those persons to be entrusted with certain privileges with regard to poisons. A licensed or registered medical practitioner is the only individual in most countries, who is allowed to prescribe, sell or possess poisons without challenge, and without having to keep a list of the quantity of poisons prescribed and sold by him in the discharge of his duties. The obligation to register his name and address is a very small matter indeed in return for such important privileges, nor need the act of registration be made unduly vexatious. All medical practitioners in the employment of Government are already registered by the Imperial and Provincial Governments, and there would be no necessity to trouble them in any way.

In Calcutta, all practitioners of medicine have to obtain a license from the Municipality, permitting them to practise, and this would simplify the registration of medical practitioners in Calcutta very greatly.

In small towns and rural districts, registration must of necessity be a very gradual process. It would follow on the exhaustion of the stock of poison in the possession of the practitioner of indigenous medicine, and the necessity of obtaining a license before it could be replenished.

A measure of this kind can only very gradually be

brought into force among a population such as that of the province of Bengal.

Numerous difficulties would no doubt be encountered in its introduction, and the full measure of benefit to be derived from its operation would only slowly be realised. But, on the other hand, without some such scheme of registration, the restriction of the sale of poisons seems impracticable.

Interference with trade.—This will practically arise only from restricting the free sale of arsenic. The value of the average annual quantity of arsenic imported into the country at the Port of Calcutta during the last ten years has been about £308 sterling, valuing the arsenic at £14 per ton.

The value of the average annual number of animals poisoned by arsenic in the province of Bengal only during the same period may be calculated as about £180 sterling.

A certain amount of annoyance must of necessity be experienced in certain trades and occupations on the introduction of a restricted sale. It is possible that certain individuals, who are now in the habit of using arsenic in their trade, may be unable to obtain it in the future. Such objections should not, however, be allowed to carry any force. The convenience of the few can hardly have weight when the interests of a population have to be considered. Those persons who are fit to be trusted with poison will be able to obtain it under conditions of restricted sale as readily as at the present time. They will however have opportunities of realising that they are responsible for the safe care of the poison, which they are permitted to buy. The value of the arsenic imported into the country at the Port of Calcutta does not indicate that any important industry would be injured by the proposed measures.

Concluding Remarks.—We have now reviewed those objections to the introduction of measures restricting the free sale of poisons which appear to us to be the most important. For many years past the introduction of such measures has been frequently recommended. It is trusted that the sketch given in our paper of the present prevalence and nature of poisoning in the province of Bengal may serve to demonstrate that the necessity still exists. Without underrating the difficulties attending the introduction and working of such a measure incident to the special conditions prevailing in India, we are confident that its introduction would be attended by great reduction in crime.

We do not pretend that the measures proposed by us are free from defect or incapable of improvement. The scheme, such as it is, is submitted for criticism. In conclusion, we have to thank Dr. SIMMON, Health Officer, Calcutta, Surgeon-Major J. B. GIBBONS, Police Surgeon, Calcutta, Dr. SASSERUSAN GHOSH, Assistant to the Health Officer, Calcutta, BABU MOHINI MOHAN CHATTERJEE, Attorney-at-Law of the Calcutta High Court and BABU SURENDRA NATH MITRA, B.A., Registrar, Bengal Secretariat, for information, and assistance in the preparation of the statistics contained in this paper.

THE CHOLERA IN INDIA

By H. H. HARRIS, M. D., F. R. S. E.

Available

Professor HARRIS, in company of Surgeon-Captain HARRIS, I. M. S., arrived in the Happy Valley District last week, and it may be interesting to the uninitiated to know how cholera inoculations are carried out in detail. The following articles constitute the requisite equipment:—

Test tubes charged with agar-agar, microscope ranging up to 1,800 power. Glass slides, glass pencil rods, spirit lamps, carbolic pixie, cedar wood oil, tin cylinders, cotton wool, and an iron kettle.

The tubes of largest size are supplied from Calcutta, charged with a quantity of agar-agar—a Japanese weed, resembling in consistency ordinary gelatine, except that it has a yellowish tinge, and maintains its solidity at a slightly higher temperature, and is not so azotic. Previous to the introduction of the comma bacillus, the agar-agar and tube are thoroughly sterilised with a view of destroying the presence of any other microbe, then a little meat extract is inserted, as the bacillus cultures prolifically in a peptone; and to obviate any trace of acidity which would retard the rapid multiplication of the microbes, the material is neutralised with just sufficient carbonate of soda and phos. of potash. The comma is put in with the aid of a sterilised glass pencil rod, (that is, a rod passed through the flame of a spirit lamp), and the tube eventually plugged an inch deep at the mouth, with cotton wool also made sterile. Fifty to a hundred or more tubes are similarly treated, according to the probable number of inoculations anticipated. The tubes are packed into a tin cylinder which is closed, and kept alongside table lamps, one on either side, the heat being equivalent to that of the body. In this position they remain for twenty-four hours, are then removed, and every sample subjected to a microscopical examination in this wise:—

A glass slide is taken, moistened across at eight points with water, as each slide indicates a sample from eight tubes. Each tube has its open end subjected to the influence of a spirit flame, the cotton removed and held by the fingers (as it must not be allowed contact with other matter), a heated pencil rod is then touched on to various parts of the agar-agar, picking off a minute particle; the mouth of the tube inflated again and plugged, is numbered and laid aside, the particle on the rod is placed on the slide and stained violet with the carbolic pixie to bring the comma out prominently; the slide is carried through the flame of the spirit lamp till all liquid portions have evaporated, and is now ready for the microscope. The examination being conducted by HARRIS with the utmost diligent care, if the sample contains anything else but the comma bacillus, that tube is rejected, and as the numbers on the slide correspond with those on the tubes, the error is easily detected. Out of ninety-four tubes examined, only one was found to contain vibrios, in two years' work, representing some forty thousand cases registered. HARRIS informs me he has had but four satisfactory tubes.

A few more prepared tubes are provided as a sort of reserve in case of future outbreaks.

The next step is preparing the material developed for transfusion to the hypodermic syringe. The same precautions against external contamination are practised. About thirty or less minims of sterilised water is added to each tube, and it is then thoroughly agitated till all the bacilli are absorbed. This mixture is drawn up into a one-and-half drachm-capacity syringe till it is full, and is ample for six or eight cases; the tubes being tilted to accumulate the syringe, any portion which might escape down its side is received into a vessel holding carbolic acid lotion and thus destroyed. Two syringes are at work: one being filled while the other is in use. The patient comes up, the needle, an inch long, is plunged deep into the muscle on the left side below the ribs, and the dose injected. The part being previously washed with carbolic acid to antiseptise the skin immediately after each injection; the needle is inserted into boiling oil for a moment. The whole process is quickly done: 550 cases occupying three hours. Every individual receives a ticket bearing his name and a number, a similar entry being made in a ledger before the operation. HARRIS retain the tickets for subsequent verification.

I omitted to mention that the algea before being put under the microscope, are covered with cedar wood oil to aid its refractory power.

The symptoms following the injection are pain at the place inoculated some five hours later on, and fever next day, when the temperature might rise to 102°. A higher temperature is viewed as favorable to the intensity of the virus.

The moment the comma's come in contact with the serum of the blood when injected, they die and are consumed by the white corpuscles, and the resulting product is the protecting element from acquiring cholera. There are no intestinal disturbances, except in about one per cent., and that in a mild way.

The dose inoculated varies with the height, size and bulk of the person. A large man receiving more than a smaller one.

The first inoculation is comparatively a mild affair, and is to be followed by another of greater intensity any time after an interval of five days, and it is prepared, I believe, preferably from a post-mortem collection of an actual case of cholera and passed through a guinea-pig.

A system so acted on is presumed to be protected from cholera, as long as a person is from small-pox who has been vaccinated, but as the inoculations have only been practised since 1892, HARRIS declines to express a definite opinion. Hence there are facts or data to record, and the discovery can merely be accepted as one based on theory and logic. A thousand cases have been inoculated in this district alone, and their progress will be carefully noted when what is termed the "cholera season" begins. The policy is very amenable to new innovations. Hence the number being contracted to the above figures. Professor HARRIS is courteous and communicative, willingly explaining every detail in connection with his work, which is being carried on at his own expense. Scientifically the whole process is very elaborate, and as an expert bacteriologist, he seems to have the courage of his convictions, and is a devoted worshipper of Koch and Pasteur. Practically, the

symptomatic manifestations appear meagre, even when compared with vaccination, as it is possible for pain and fever to be produced from traumatic causes by reason of the deep plunge of needle and rupturing of muscular fibres by inserting an innocent ten or fifteen minims of sterilised water. Owing to the intense nature of the second inoculation, the first is essential to modify its influence, whether there is any difference in protecting individuals from a chemical poison, as in snake-bite, or in micro-organisms, as in cholera and small-pox, is doubtful to decide. One thing appears moderately certain from a scientific or bacteriologist's point of view; that is, that it requires a cultivated microbe to oust his uncultured ilk, and if like is going to cure like, it brings us tolerably close to bacterial homoeopathy. Professor HAFKINE is keenly alive to the fact that his opponents and supporters are watching him carefully, and though a Russian, he is fluently acquainted with English, and keeps himself well posted in all the literature which has come to be known as "Haffkinism," by taking in every medical paper, worth reading, either in English, Russian, French or German.

On my own part, I must confess receiving an interesting lesson, and being perfectly neutral in my opinion on the subject, more perhaps from ignorance; the course of these 1,000 cases mentioned will illustrate to some extent at least, what can only be regarded at present as theory; even if the second inoculation is not performed, the first is accredited with a six months' protection.

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THE THERAPEUTICS OF INDIAN MADAR (CALATROPIS GIGANTEA.)

By JOHN MORTON, M.D., L.R.C.P., & S., Edin.

Mussorie.

It would be out of place were I to give a sketch of the botanical features of Indian *madar*. They are to be found in every text-book on Indian Botany, and GRISG and OLIVER both make these significant remarks about its therapeutic uses. "The milk of the *madar* is reputed in native medicine" (OLIVER). Preparations of the plant are sometimes used in medicine (GRISG). DR. CHW in a letter to the *Indian Medical Record* says that Unani and Ayurvedic books mention it as of use in eczema, indolent and atonic ulcers and splenic fever. Every intelligent native points to *madar* as a plant possessing medicinal virtues. I therefore lay no claim to have discovered a new remedy for eczema, but I would request a recognition of its revival by my happy experience. Some notes taken at the time when I was treating my first case of eczema will find a suitable niche in this place.

An Irish lady, about 40 years of age, had been suffering from eczema extending from the axilla to the tips of her fingers of one arm for the last nine years. Every doctor in Mussorie had attempted a cure, and the list of medicines tried internally would fill a whole page of the *Indian Medical Record*. There is a family history of rheumatism, but the patient herself has had no symptoms of the disease. Anti-rheumatic drugs have therefore also had a fair chance. By accident I was asked to try a poultice of *madar* leaves. I commenced very cautiously, as the case was a very bad one; the slightest exposure to air making the inflamed

parts weep with a serious exudation, and so I applied the poultice only to the fingers. On the second day the weeping had stopped, and the parts looked healthy. It was continued for another two days, and the fingers had healed. Encouraged with this result, I applied it to the whole arm; and, miraculous to relate, this was well within a week. The surprise to patient was immense; for she, like a good Irish woman, hated Indian drugs, but has since been converted to a different opinion. It would be needless re-iteration were I to record notes of the many cases of eczema, which were cured, to speak metaphorically, in the twinkling of an eye by its use. My first case of eczema was published in the *Indian Medical Record* of 1st July 1894, and was instrumental in bringing out a discussion in the lay papers about its merits in neuralgia also. Here is an account from the *Madras Mail*:—

In your issue of the 10th instant, I see an extract from the *Indian Medical Record* of an obstinate case of eczema having been cured by the application of a poultice of the leaves of the *madar* plant (*calotropis gigantea*, known in Tamil as Yerkolam and in Kanaree as Yekada). A few years back, I suffered with a severe attack of neuralgia and tried several patent medicines such as Tonga, Tikeel, Menthol, Phenactin and several others; the doctors also could give me no relief and I had to be under the influence of narcotics to bear the excruciating pain. While thus suffering agony for several days, an old native woman recommended my using the leaves of the *madar* plant, warming them on a charcoal fire, and then applying them as a poultice on either side of my face. I would have done almost anything to obtain relief, so instead of using the leaf as recommended, I procured the milky juice of the plant, and just before going to bed with a strong opiate, I anointed my eyelids with castor oil, and then most heroically smeared my face with the juice or milk of the plant. The next morning, after a sound sleep, I got up without the slightest tinge of pain I had been suffering from for several days, but my face was like a piece of raw beef from the effects of the acrid juice. A few days after the skin peeled off, and I felt as well as ever, and since then I have not had such another attack of neuralgia. I have not the least doubt that if I applied the warmed leaves instead of the acrid juice, it would have had the same described effect, and I would have avoided the blistering. I took, however, the precaution of using the castor oil to my eyes, to prevent the juice and its fumes from injuring my eyes. This plant has not only such remarkable medicinal qualities, but produces the strongest silky fibre known, and native fishermen make fishing lines out of it, as they do not rot from repeated wettings, and are lighter and stronger than any other fibre. I have no doubt that there are many other common plants that have valuable medicinal properties not known to Europeans, but are largely used by the natives of India.

A case of leprosy ulcer healed under its influence in a short time also; but as it was published recently in the *Indian Medical Record*, most of my readers, I have no doubt, are acquainted with it. In cholera a lay friend of mine informs me that he has for years used pills made of *madar* flowers with black salt and pepper in equal quantities, gives every two hours, and it has never failed to stop rapidly all the urgent symptoms, especially diarrhoea and vomiting. If given in the first stage, one is almost certain of a cure. Where troops of remedies are

suggested many years and must with continued failure, it would not be asking too much to give *marka* a fair trial.

Enough, very much I am unable to say before your readers, any information regarding its active principle or physiological mode of action, which physiological and chemical experts can alone supply, but I have said enough for the busy practitioner, to convince him that we have here a potent drug for eczema and other diseases, and although it may be presumptuous to say so at this stage, I have an idea that I have added another drag to the pharmacopoeia of the next decade.

EARLY MARRIAGE: ITS EVIL EFFECTS ON HINDU SOCIETY.

BY HARA KALI SEN, V.L.M.S.

Raipur, Dinajpur.

Most Indian practitioners know but too well that early marriage and many of our social and religious customs are solely responsible for a good deal of the ill health that our females suffer from. We all know that to infant marriage is justly attributed the terrible physical and mental maladies that many of our race are afflicted with. But few, few indeed are those who would dare to risk the wrath of the multitudes by proclaiming the truth and cautioning the people against throwing the heavy burdens of parturition on their wives and daughters before their bodies are prepared to bear the strain.

Every man owes society a solemn duty, and that medical man or woman, who hesitates to point out to his or her patient and her parents, that the only cause of her suffering is early marriage, is a coward and an enemy to mankind. Yet many of our doctors marry their daughters at the tender age of 8 or 10 years, and deliberately condemn them to the risk of life-long widowhood to escape the horrors of which, many seek the poison cup or rush into the public brothel.

Many of my countrymen go to Europe to receive their medical education, but on coming back to India vehemently advocate child marriage and enforced widowhood and eat cow-dung to purify their souls and bodies and become pure Hindus. Can I or ought I to congratulate them on their brilliant successes at their examinations or admire them for obtaining high or responsible positions if they are cowards *socially*? Certainly not; for they cannot be heroes politically, and I do not believe that the man who is immoral privately, can be moral officially.

Physical evils.—According to Hindu usage, a boy may marry at any age but it is compulsory for a girl to marry, before puberty, as marriage after she begins to menstruate, is invalid. Eight is the most auspicious age, because that was the age of the goddess *Gouri* when she married the god *Shiva*. Among the *advocated* Hindus, the struggle for existence, their Western education, and the liberty to marry at any age act as factors to prevent girls marrying before 16; but it is not so with the illiterate masses where a bachelor or widower from 16 to 80 years of age must marry a girl 8 years old, while among the *Kalis* Brahmins one man may marry 100 girls, if he likes, and submit them long before they reach maturity to degrading and abominable marriage-rites that often culminate in murder, as exemplified by Hari Mahesh's case, in consequence of which Government raised the "age of consent" from 10

to 12 years. But how many Hari Maheshs are there that pass undetected? Hundreds or thousands probably, at least death certification and the sanctity of the *purdah* system afford abundant facilities to hide the murder or death from torture of child-wives.

We have it on the authority of the most eminent obstetricians that too early coitus, before the uterus is fully developed and properly fixed in the pelvis. Nature intended it to occupy, leads to displacement and distension of this organ with consequent menorrhagia, dysmenorrhoea, leucorrhoea, and inflammation and distortion of the uterus, vulva and vagina. Then follow the dangers of pregnancy and the dangers of too early gestation with prolonged and painful labor, instrumental delivery, metritis and uterine diseases, pelvic deformity, pelvic cellulitis and life-long ill health. The Hindu proverb, "a woman is old at 20" is verified by the fact that she is often a mother at 14 and a grandmother at 30 years of age, and that while she herself is yet a child, she annually bears a child, the constant suckling of which, combined with the tomb-like seclusion of the *zenana*, makes life a curse, and her body (in many cases), a perfect wreck.

We cannot expect weakly, very young and immature females to beget strong healthy children; and it is a well-known fact that too early sexual indulgence induces or causes phthisis, dyspepsia, diabetes, spermatorrhoea, loss of memory, imbecility, melancholia, mania and many other diseases, both mental and physical.

Moral evils.—An elevated mind and a depraved body are not compatible with each other, and as the physical and the mental phenomena are dependent one on the other, it follows that a weak body has a weak mind. This is why the Bengalee is proverbially a coward and is devoid of (or possesses very little) moral courage, strength of purpose, perseverance and resolution. This is why we have become the slaves of our passions and dare not abolish *akutashi*, early marriage, enforced widowhood, polygamy, *zenana*, and many other abominable as well as destructive institutions of caste, that degrade our sons into brute-beasts and daily kill our daughters under our very noses or induce the propagation of weakly progeny.

Social evils.—Early marriage makes boys and girls too amorous, precocious, timid and sensual, and directly leads to poverty, which latter, though it might be the friend or virtue of saints, prophets, and ascetics, is a deadly curse to society. To ruthlessly multiply the race without any pre-arrangement for the support and maintenance of our progeny is to add an additional burden to the miseries of poverty; leading to absolute destitution, especially in these hard times where famine is deliberately staring us in the face and hundreds of our university under-graduates cannot possibly obtain employment or are glad to take up situations of Rs. 20 or 30 per mensem which is totally inadequate to feed a family.

With the struggle for existence, the poverty increases and fathers with marriageable sons now demand such ruinous dowries from the parents of the daughters that are to be given in marriage, that Hindu society is really becoming a matrimonial market, where parents are purchasers and boys and girls are unsexed commodities, with the consequence that while the price of boys is daily increasing, that

to grow up depending with such rapidity that those girls who are actually sold in the marriage market, are either thrown into the gutter as slaves, or kept over to prostitution, or afterwards consigned to harlots, leprosy and other evils, as so many articles to make money by. And all this because procreation begins too early with the Hindus, and children come before the parents are in a position to support them.

With Eastern nations the male chooses his partner when he is in a position to properly maintain her; but in India the Hindu is married and often a father while he is yet a school boy, and if a son is born to him there is general rejoicing in his household; but as soon as a new daughter arrives, every tongue becomes dumb and the entire family hang their heads in sorrow.

Let but this state of things continue for a while longer, and the Hindus will surely emulate the Rajputs by immolating their infant daughters; but in such a way that while the legal lists of still-births and early deaths of female infants may enormously increase, there will probably be no prosecutions for the detection of child murder. And so long as these institutions associated with early marriage are allowed to exist, we cannot expect to remove the stumbling blocks in the path of our individual and national progress.

A MIRROR OF PRACTICE.

A PECULIAR CASE OF HAND AND FUNIS PRESENTATION: EXTRACTION OF THE CHILD: RESULT: REMARKS.

By R. K. TANDAN, M.B., C.M. (Edin.).
Medical Officer, Bhamptore.

At 1 A.M. on the 23rd September 1894, I was called by the Lady Hospital Assistant to attend to a "very difficult case of labor," as she termed it, at a village seven miles from Bhamptore. From the man who came for me I gathered—

- (1). That the woman had been in labor for the last eight days.
- (2). That two native *dhais* had been attending her all along.
- (3). That one arm and the cord were presenting.
- (4). That according to these "ladies" the child had died.
- (5). That since last evening the Lady Hospital Assistant had been in attendance and even she had been unsuccessful in relieving the woman.

I went with the man to the village, armed with suitable armamentarium, on reaching which I was at once shown into a very dirty low-thatched hut, the very stuffiness of which nearly choked me. The woman was in an æsthenic condition. The pulse was weak and thready. Her whole body was covered with a cold clammy sweat. The tongue was dry, and her breath came in gasps. On examination, I found that there was no arm in the vaginal canal: certainly the cord was there, and could be felt. I was told by the *dhai* doctor that in her attempts to get out the child the *dhai* *drum* (which was quite decomposed) had come off. I knew then there was but little hope for the woman, yet I felt something must be done to give her a last chance.

I performed external manual examination, and found that the long curved head of the foetus was not in the pelvic inlet, something high. The rest of the child was not engaged. I introduced my hand into the vagina and found that the child was rightly connected over its shoulders, so much so that I could not pass my hand far enough to reach the feet of the foetus, and I did not wish to use force. The best of rupture. Turning was therefore impossible; still quite out of question. The abdomen was presenting, and I was for a few moments in a 'fix' what to do. Acting impulsively on the impulse of the moment, I tore through the presenting abdominal wall with my finger-nail, went past the abdominal viscera, got hold of the spine with my thumb and two fingers, with a little force fractured it and bent it in two, and then with my left hand, passed in the blunt hook and engaged it in the bend I had made in the spine. I then withdrew my right hand, and with it used traction till the fractured portion got engaged in the pelvic inlet. Intermittent traction was continued, simulating the natural process of labor, and at last after half an hour's hard work, there came a sudden pain, and with that the dead foetus came away. It was a male child, and the whole body was highly decomposed. Decomposition had also begun in the abdominal viscera. The offensive smell that now permeated the whole room in which we were, can better be imagined than described. Fifteen minutes after the extraction of the child the decomposed placenta also came away. I then douched out the cavity of the uterus with corrosive lotion, put on a binder, and gave the woman ext. ergot. liq. with tinc. opii. I also prescribed quinine with a stimulant fever mixture, and left her fully an hour after the birth of the child. Next day in the afternoon, her husband came to tell me that the woman had very high fever which had been preceded by rigors, and that when he left her, she was very delirious. This was as I had expected all along, and I was therefore not surprised when I heard his report. I knew that the woman was beyond all treatment, and that she could not survive that night, yet as a *desperat* resort, I prescribed phenacetin along with a stimulant. I also directed the man to apply cold water to her head. After this I received no news about her, but I subsequently learned from a boy who came to our hospital with enlarged spleen, that the woman had died that very night.

It was a very sad case, and one that might have ended happily had it not been for the unfortunate interference of the *dhai*. In this case the woman was weak from the very beginning. The pulse was not so certain day, when a *dhai* was called in to attend. This "lady" began rubbing and scrubbing with all her might, the abdomen of her patient, just in the same way as a servant girl might the door-steps, and this application of unnecessary force must probably displaced the foetus *in utero*. Rubbing and kneading went on till the arm presented. Then this "lady" called in to assist her, another very clever "lady," who came in great hurry, and passed up her head into the uterus, perhaps tried to turn, but failed. In withdrawing her head, the cord got broken and caused the death of the child. All this being known, yet the *dhai* doctor kept on with his attempts, and forced the poor sufferer to keep on until she died.

with the intent that she was completely exhausted and killed
in the act. These facts were stated from the two
slaves by bribing and threatening them.

It is high time that the Indian Medical Association took this important matter in hand and memorialised the Government for REGISTERED "dhais."

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UNEXPECTED DIFFICULTIES IN LITHOLAPAXY.

BY L. N. CHOUDHURI, L.M.S.,

Officiating Civil Surgeon, Batul, C. P.

A Hindu child, *at* 5 years, was brought to the Hoshangabad Main Dispensary, which I was in charge of, with symptoms pointing to vesical calculus. I wounded the bladder and detected stone. After an enema, the child was put under chloroform. I washed out the bladder as usual, and tried to pass a No. 8 Thompson's lithotrite, but could not succeed, the urethra being small. I then attempted a No. 4. First of all I examined the instrument, and found it closed well. I oiled, locked, and passed it in without any difficulty. I was taught by Dr. PERRY (Surgeon to the Mayo Hospital, Lahore,) to turn the handle of the instrument the *wrong way* before unlocking it each time in the bladder. This I did, and heard a fairly loud "click," which I thought to be due to the falling of the stone over the blades of the lithotrite, and did not mind it, but tried to secure the stone, which I did without any difficulty, and succeeded in breaking it. After completion of my first-crushing, and when about to withdraw the lithotrite, I noticed the instrument required extra force in the act. I evacuated the bladder, but on my second introduction of the instrument, I found the upper blade of it bent, and unable to fit the lower, and this reminded me of the "click" I heard on my first opening the instrument in the bladder and the extra force required in withdrawing it. For the time I was puzzled what to do, as I had no other smaller instrument at my disposal.

As no time was to be lost, I decided at once to have a hammer by my side at the operating table in future, to put the lithotrite right whenever necessary. I decided, after introducing, to use an extra amount of force in taking it out, as I did on the first occasion. This arrangement worked very nicely and I completed my operation satisfactorily. The child did well and was discharged after four or five days, cured. The stone was a small one, weighing only about 40 grains, and consisting of phosphates with a uric acid nucleus.

Had I not reversed the handle of the lithotrite while in the bladder, I would have certainly injured the mucosa seriously, by opening the jammed blades, with a tremendous jerk. The "click" I heard on my first opening the instrument in the bladder was due to this forcible separation of the jammed blades. The jamming being caused, no doubt, by the careless handling of the instrument by my compounder while cleaning it. Otherwise it could not possibly have been bent in crushing a 40 grain phosphatic stone.

Our able Professor, Dr. PERAZ, always insisted on our examining all instruments, to see whether they were in working order prior to commencing any operation.

A precaution which, if it had followed, would have obtained my answer. I merely examined the things, and seeing that they were for the most part in the condition (nominally) that the school instrument was in working order, with the untoward result that happened.

Had I been unable to withdraw the lithotrite from the poor child's bladder, I leave the reader to judge of the consequences!

The above case is recorded simply (1) to warn my fellow brethren to examine each and every instrument to ascertain whether they are in a workable condition or not, before commencing any operation; (2) to insist upon medical students to exert an extra amount of care in watching the details of operations, when assisting their professors, however easy or insignificant they may appear.

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COMPOUND FRACTURE OF BOTH BONES OF
THE FOREARM: UNION BY SUTURE.

BY ALF. McCABE-DALLAS, L.M. DENT, L.R.C.P., &c.

Kumbhir.

A HINDU boy, aged 12 years, fell from a tree, the drop being about ten feet. He alighted on his left forearm, the arm apparently being extended at the time of contact with the ground. (Surmised from the nature of the injury).

Both bones of the left forearm were fractured at a point four inches above the wrist, the upper fragments being forced through the flesh to the extent of an inch, the ends being slightly comminuted. With every form of manipulation it seemed impossible to reduce the fracture and set the bones. Under antiseptic measures the wound was opened up fully, anteriorly, and the comminuted portion clipped off, resulting in a loss of a quarter of an inch in length. The fractured ends were brought into apposition and sutured. Three sterilised, carboliced, medium catgut sutures were used, one in front, one below, and one externally; the incised portion being similarly treated, then dusted with iodoform, dressed with boracic gauze, put up in a splint, and the patient kept in bed for a month; his arm extended and supported on a pillow. No trouble ensued, the wound healed by first intention, the sutures became organised, and the bones united rapidly. At the end of two months, the lad could use his arm fairly well, and now after four months, experiences no inconvenience whatever. I am not aware of fractured bones having been dealt with in this manner before, but as the patient was young and the bones moderately soft, the end justified the means. I doubt, however, if in an adult, where the bones are quite ossified, suturing would be admissible. The dressings were replaced every third day for the first week; a rise of temperature of a degree or so occurred, which was subdued with a little quinine and a small dose of sulphonal given for a couple of nights, as the pain prevented sleep.

Indian Medical Record

16th April, 1906.

CHOLOLITHIASIS.

As the subject of gall-stones is imperfectly known and it is impossible to say what changes in the human economy indicate an excess of essential bile constituents, Dr. J. H. HORSCHER's important paper on this subject is well worth study and from it we give the following epitome:—

Perfectly fresh human bile has a specific gravity ranging from 1,005 to 1,008, and consists chemically of bilirubin and biliverdin, mucoid nucleo-albumin, cholesterin, neutral fats, soaps, lecithin, mineral matters, traces of iron and gases in which carbonic acid predominates. The quantity of bile secreted in 24 hours varies from 10 to 80 ounces, diminishing during abstinence, and increasing immediately after meals.

Gall-stones may be of any shape, varying in size from a pin's head to as large as a nutmeg, and in color from a light yellow to deep brown or black, chemically they consist of (a) cholesterin, (b) cholesterin and bilirubin calcium, (c) calcium itself, (d) bilirubin and calcium in the proportion of one to three, (e) a combination of all the ingredients.

The causes of gall-stones may be classified thus:—(1) Those located in the common duct, and due to retention of bile and obstruction, the duct being greatly dependent for its patency on lymphatic absorption of the biliary constituents, absence of bile ingredients produces gall-stone formations, which are also absent in hydrops of the gall-bladder. (2) Those located in the gall-bladder, among which is the presence of foreign bodies, such as ascaris lumbricoides, needles, distoma hepaticum, epithelial debris and casts of intra-hepatic ducts. (3) Those located in the bile appear to depend on bile-stasis, resulting in the decomposition of the bile salts and a deposition of the cholesterine and bilirubin with a tendency to the secretion of calcium carbonate by the mucous membrane of the gall-bladder. (4) Those located in the liver tissue, of which nothing is really known.

The diagnosis of gall-stone:—(1) Previous occurrence, (2) colicky, sudden and violent paroxysmal pain, radiating from the epigastric or right hypochondriac region to the right shoulder blade, to the cardiac and lumbar regions, and intensified by pressure over the dividing line of epigastric and right hypochondriac tracts, (3) acholic faeces, (4) jaundice following the colic, (5) bile in the urine and calculi in the faeces, (6) calculi may be revealed by palpation of gall-bladder. Yet all except tenderness of the gall-bladder tumor may be absent.

The symptomatology varies with idiosyncrasies. The symptoms ordinarily show themselves after sudden physical exertion, jolting on a horse or in a carriage, or a heavy meal. Jaundice appears in the sclerotic of the eye within 24 hours after the first onset of the attack, and rapidly involves the whole of the skin, while the pulse becomes weak

and cold sweats invade the skin. With similar vomiting, tightness in chest, or shock accompanied by epistaxis, fits and syncope may manifest themselves. Calculi with the jaundice are acholic stools, and the urine, which contains the bile pigments deposits an abundance of bilanin. The colic, which ceases suddenly, showing that a calculus has either fallen back into the gall-bladder or has passed through the common duct and entered the duodenum, may be of daily occurrence, and months or even years may elapse before their recurrence. In typical cases from one gall-stone to several hundreds of calculi will be passed during colic, which immediately subsides; but more or less gastric disturbance generally remains, and shews itself by a tendency to flatus, anorexia, eructations and very often constipation, all combining to make life miserable.

Differential Diagnosis.—Renal colic may be differentiated by the pain radiating from the lumbar region down into the testes, thigh and hypogastric region, the absence of jaundice, bile in the urine and acholic faeces; the urine containing blood and pus after an attack, vesical tenesmus and tenderness over the kidneys. Concretions may also be passed. Intestinal colic differs from hepatic colic by distinctly intermittent pain beginning in the umbilical region and relieved by pressure; there may be tympanitis and contraction of abdominal muscles, but there are no signs of hepatic disturbance. Carcinoma of the pancreas has sometimes blurred the diagnosis by obstructing the common duct and giving rise to jaundice, dropy of the gall bladder and bile in the urine. It may, however, be distinguished by the rapid emaciation and cachexia, sometimes fatty but acholic stools, the presence of a fixed tumor and often nodules in the umbilical region. Though the jaundice persists, the concomitant symptoms give no history of hepatic colic. Catarrhal jaundice remains constant from 14 to 42 days, and is accompanied by pyrexia and sometimes chills, but not by hepatic colic or the passage of calculi. Appendicitis beginning suddenly with nausea, chills, high temperature, sharp pain in the epigastric region, and sometimes diarrhoea confounds the diagnosis with that of chololithiasis; but there is an absence of jaundice and of bile in the urine, the faeces are acholic and the pain becomes localized in the right iliac region with decided tenderness, local tympanitis, increased resistance, and an indurated mass makes its appearance. Echinochoecus cysts rarely originate in the region of the gall-bladder, and though they sometimes grow large enough to occlude the bile ducts and produce jaundice, there is no pain nor disturbance of gastric function, and the jaundice persists. Faecal accumulations in the transverse colon are coupled with a history of bowel-obstruction, intestinal colic and constipation; but the irregular, superficial, non-fluctuating and freely moveable mass and the treatment with purgatives will remove all doubts. Renal tumors may be differentiated by diminution of the normal quantity of urine, the presence of renal colic and lumbar pain, or there may be a sudden increase in the urine voided and a corresponding diminution in the size of the tumor. Moveable kidney may co-exist with chololithiasis or it may slip under the liver and complicate the diagnosis; but it can generally be distinguished (a) by being bean-shaped and so freely moveable that it can be replaced; (b) it does

and the respiratory movements, in spite of which it can be fixed between the hands: (c) there may be a history of renal colic, but there is certainly none of jaundice, epistaxis, hæmaturia or bile in the urine.

The complications of gall-stones.—(1). Obstruction, or dilatation of either the common or cystic ducts or of both. (2). Carcinoma of the gall-tract. (3). Cholecystitis with thickening or diverticulation or contraction, and almost entire obliteration of the gall-bladder and a deposit of connective tissue with adhesions to the surrounding organs. (4). Hydrops of the gall-bladder. (5). Rupture of the gall-bladder or bile ducts. (6). Impaction of gall-stones and suppuration in the gall-bladder. (7). Hepatic abscess. (8). Rupture of abscess into the colon, duodenum, kidneys or stomach, or through the abdominal wall.

The treatment can properly be divided into (1) *Surgical*, for which there are several methods, but the ideal operation consists in cholecysto-duodenostomy, which ensures efficient drainage of the gall-bladder and removes the tendency to fistula by establishing an anastomosis between the gall-bladder and the duodenum. (2) *Therapeutic*, which at best is only palliative. Diet and careful *regime* with laxatives may encourage the elimination of calculi by their action on the intestines and bile secretion, while remedies such as arsenic, olive oil, iron succinate, the mineral acids and the salines may relieve constipation, gastric disturbances, &c., but their action is not permanent, and they do not dissolve gall-stones.

The indications for operation are:—Hepatic abscess due to gall-stones; hepatic colic frequently occurring; gastralgia or persistent gastric disturbances with physical exhaustion, anemia or tumor in region of gall-bladder; obstruction of common duct by calculi with cholemia and gall-bladder dropy; suppurative cholecystitis, impaction of gall-stones, or hydrops of gall-bladder with obstruction of cystic duct, and dangerous complications, such as rupture of gall-tract, adhesions, carcinoma, &c.

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URGENT MEDICAL REFORMS FOR INDIA.

WHILE the Indian Medical Congress of 1894 will mark an era in the history of medicine and of the medical profession in India, the practical benefits that this country will derive from the deliberations and discussions of that gathering, must to no inconsiderable degree, be attributed to the fact of its having happily secured as its crowning spirit, that grand old man of the British medical world, DR. ERNEST HART. Without the co-operation of one having the independence, thoughtfulness, conviction, and thorough acquaintance with scientific matters pertaining to our calling, the many sanitary and hygienic defects under which the country has long labored, would have continued as little unheeded as of old. The profession in India is almost altogether official. It has learned the personal benefits of adopting, in matters bearing on the acts and orders of the Government, the motto that "Silence is golden." Dr. HART, however, exposed with no uncertain voice and in no ambiguous terms, many of the ways in which the work of the profession and the sanitary needs of the country are most seriously handicapped; and when it is remembered that his utterances, so far at least as they

relate to scientific matters, are the outcome of experience of things to which he has devoted careful consideration, and with which he has dealt from youth to old age, it will, to say the least, be agreeable both to Dr. HART and to the teeming millions of India, if those utterances were not regarded as weighty and important. We are glad to find, however, that the Government is disposed to give due consideration to Dr. HART's recommendations; and that there appears to be a general awakening in the country in the cases of hygiene and preventive medicine.

We are particularly pleased to find that there is an authoritative denunciation of the system on which the medical services of the country is worked. Dr. HART plainly pronounces the existing system to be altogether wrong. It has been our object in repeated articles in the *Record* to convince the Government to this same effect—that the civil and military medical work of this country is ill distributed, unnecessarily expensive, unjustly appropriated in many particulars by certain classes and communities, that that economy compatible of course, with efficiency, was not being studied, that both our military and civil medical expenditures were unnecessarily high; in short, that the existing systems of medical provision are altogether wrong. We think it is high time that the re-organisation of the medical services of the country was closely considered on the lines broadly indicated by ourselves and by Dr. HART, (1) *viz.*, the institution of a purely civil medical organisation for civil work, and of a purely military service for European and native troops alike; (2) due consideration being given for special qualifications for work of a specific nature. We hardly think that Dr. HART will attempt to suggest the details of the work ing of his suggested reforms; nor can he be expected to be conversant with the material available in the country; and with all such local circumstances and conditions which affect the applicability or otherwise of the needed reforms. Much as Dr. HART's opinions on scientific medical problems and difficulties demand respect, it cannot for a moment be admitted that a look round the country can place one in possession of all facts of a departmental or administrative nature. As we pointed out in an editorial in our issue of 1st February 1895, Dr. HART, like most enquiring visitors to this country, has rather confused ideas of medical official and administrative details; and in many respects he has formed his opinions and drawn his conclusions from one-sided representations. While then we admit and reiterate this fact—that there is a pressing necessity for radical changes in the medical services of the country—those changes to be impartial in their operation, must be worked out and fixed, and determined by a Committee formed of representatives of the Government itself, of officials of the State medical services, and of independent or non-official members of the profession. If the help of Dr. HART as President of such a Committee can be secured, it may be safely predicted that the medical organisations of this country will be considerably better in every respect; and from Dr. HART's well-tried and well-proved interest in the medical work of this country, we may go so far as to presume that notwithstanding the many personal inconveniences entailed, he will not refuse such a Committee the help of his valuable services and exceptional experience. Something must be

done to relieve our finances of the ap-keep of that portion of our commissioned staff whose daily professional work is of the most trifling nature, and also of the maintenance of highly paid military officers for purely civil duties. We will not attempt to go into any details regarding the reforms that may be effected in the medical services of India. We leave this, as we hinted above, to a council of experienced and select advisers; but we may indicate a few of the respects in which the country appears to be preposterously lavish in its medical expenditure. It may not be altogether new ground on which we are travelling; but as it leads to very important advantages to the country, we go over the ground with unabated interest, and, if necessary, will go over it again and again, as we feel sure that repeated attacks are necessary to break down the barriers that are opposed against the advance of indigenous merit into comfortable preserves.

The proposed Indian Civil Medical Service may be recruited in much the same way as the Indian Medical Service is at present; but public health, sanitary science and hygiene, should form special subjects of the competitive examination. If any conservatism, opposing the holding of the competitive examination simultaneously in India and in England, is permitted to hold sway, one-fourth of the appointments should be reserved for Civil Assistant Surgeons of approved service and qualifications. The teaching staffs of medical schools and colleges of the country should be composed of the most carefully selected and the fittest men of the civil medical services; while the mystic power (which distinguishes no other class of mortals, but the members of the Indian Medical Service) of being transformable in the short period not of one's life time, but of his Indian service into a professor of each and every branch of an extensive and illimitable art, will cease to exert its ridiculous sway. The lavish military medical expenditure maintained in this country may be most strikingly shewn by reducing a few facts to figures. For such an illustration it will be enough to consider the figures in the most recently issued report of the Sanitary Commissioner with the Government of India, for the reports of any previous year will be found to represent virtually the same facts in the matter with which we are at present concerned.

The Native army of India has at the very least a hundred and fifty commissioned doctors to attend to its medical requirements. We are not considering the total number of officers in the Indian Medical Service, but only the number always required for duty with regiments. The strength of our native troops for the year 1893 was 127,091; and the admissions into hospital amounted to 862 *per mille* of strength. The number constantly sick was 32 *per thousand* of strength; so that in plain and equivalent terms a hundred and fifty medical officers, in receipt of salaries ranging from rupees four hundred to a thousand per mensem, are kept up, each of whom has the treatment of about 730 cases per annum, and the bulk of whose onerous professional labors consists in the treatment of a daily average of about 26 patients. Again, there are small detachments of European troops, from sixty to a hundred strong, garrisoning small posts, and provided with an officer of the Medical Staff who may be

of any rank from Surgeon-Captain to Surgeon Lieutenant-Colonel. Surely much of this must strike any one as astounding military medical extravagance, and as unjustifiably expensive medical provision. Surely, as Dr. HARTER HART said more or less in his Congress address, although in a different connection, these trifling duties may be performed by less expensive agencies. These charges may, and in all propriety should be, relegated to the Commissioned Assistant Surgeons; for it is not kind, generous, or conducive to the good of the service, that Warrant Officers, who in the winter of their departmental career attain a commission, conferred as the regulations say, "by selection for ability and merit," be subjected to the last day and hour of their service, to the galling subordination entailed in the subordinate charge of station hospitals. This question naturally presents itself—will the medical interests of the detachments or regiments which these Commissioned Assistant Surgeons may by the suggested arrangement be placed in charge of be sufficiently met? For a satisfactory answer to this question we had best consult the workings and the experiences of the past quarter of a century and over. That experience tells us that Warrant Medical Officers are commonly placed in medical charge of detachments, companies, and wings of European and Native corps, by rail and by sea, on the line of march during reliefs, in escorting sick convoys, in the field, and in outposts on active service. Warrant Medical Officers have been trusted with, and have faithfully and efficiently held medical charge of detachments, large and small, of European and Native troops; and if they have been tried and not found wanting in these important circumstances where their resources have been tested, why need we have the least misgivings as to their capacity in garrison employ, where they may generally calculate on and receive a second or third opinion in serious matters and in important cases? Again, a fair number of uncovenanted medical charges in India and Burma have always been held by Warrant Medical Officers. These charges include all the multifarious duties ordinarily demanded of District Surgeons; and for the thirty or more years that this practice has obtained, there can not be recalled a single instance in which the individual has not been equal to the charge. The foregoing, we know, is a very rough delineation of how the medical services of the country may be reconstituted, but it indicates the directions in which charge and reform are specially called for. "Time changeth all things," and there is every reason to hope that the time is not very remote, which will make the old order of medical affairs in India give place to changes similar to those which we have been advocating.

THE TREATMENT OF GANGLION.

S. DUPLAY recommends a new and simple method. He injects from 5 to 10 drops of the tincture of iodine into the ganglion. A bandage is applied partly with the object of exercising pressure and partly of fixing the adjacent articulation. The pain is but slight, and ceases on the second or third day. The cure is usually complete in five or six days. Sometimes a second injection may be necessary on the fifth or sixth day. Recurrence has been known after all the usual methods of treatment, and is one of the author's cases the ganglion had already been twice removed.

SMALL-POX AND VACCINATION IN CALCUTTA: SOME LESSONS FROM THE PRESENT EPIDEMIC.

The small-pox epidemic in Calcutta continues unabated, if anything, it rages more virulently, though the health reports do not accurately attest this fact, yet it is well known to most physicians practising in town. The registered deaths for the past few weeks have varied between 250 and 200, but 300 would be more correct. This awful mortality has swelled the death-rate to 66 per mille. Vaccination is being blamed as being non-protective in many cases. Enquiry, however, elicits the fact, that in no case where vaccination has been successful, has small-pox shewn itself. An epidemic of chicken-pox is also raging in the town, and incompetent Inspectors from the Health Department of the Municipality are reporting some such cases as small-pox. Vaccination as carried on by the Municipality, has many serious drawbacks which demand urgent attention and immediate correction. The lymph used in many instances is worthless, the calves' vesicles from which it is drawn, being dried or too far advanced to yield good lymph. Again the calves themselves are bad specimens of animals, being half starved and sickly-looking. We believe, too, that prior to being used for lymph cultivation, these animals are not subjected to a careful veterinary examination. Altogether this branch of the Health Department needs a thorough overhauling. Neglect of the very essentials of vaccination leads to more evils than one. Persons who have been subjected to inoculation as a means of protection from small-pox, are deluded into believing that they are safe from infection, inasmuch as they are given to understand that if the vaccination "takes" they are safe, and if it does not "take" they are still held to be "small-pox proof" by the influence of an earlier inoculation probably in infancy.

Owing to this false sense of security, many, who ought imperatively to be re-vaccinated because of unsuccessful inoculation, have been attacked by small-pox, and a few of these have died. The wrong therefore to the public, of using imperfect lymph, is a very serious one indeed. Another danger in the matter of vaccination is, that the public vaccinators are a class of illiterate men, who are simply taught the art of vaccinating after a fashion, but who are utterly devoid of any knowledge of the physical signs and conditions of health that should interdict vaccination, nor can they give any instruction as to the diet, general habits of life, precautions to be observed and treatment to be adopted in the course of the incubative or developmental stages of this form of inoculation. It often happens too, as frequently evidenced during the present epidemic, that these men operate badly, they are uncleanly in person and untidy in their methods, while the "hygiene of the lancet" is a matter of which they are blissfully ignorant. So that the public who trust themselves in the hands of such ignorant operators are certainly placed at a very serious disadvantage, as in many cases the complications of vaccination are often not only painful and distressing, but alarming. Altogether the neglectful and faulty methods of vaccination and the imperfect lymph used, are largely responsible for the spread of the disease,

and it is high time the municipality were made to feel that their reputation was seriously at stake in the matter of their duty in the Vaccination Department. Yet these evils could easily be avoided by placing the work of vaccination in the hands of qualified medical men, as it is done in every other civilized country in the world, except India. Such an innovation in Calcutta and other large Indian cities need be attended with no greater expense than at present, for the terms on which public vaccination is done in Great Britain by private practitioners would in no way be above what is now spent on very doubtfully trained operators of a very illiterate type indeed.

Another matter of vital importance for the sanitary welfare of Calcutta, is what we so strongly urged in our last issue, namely, the need of a special hospital to meet the constantly repeated demands of epidemic disease in this large city. We held that this was a duty and a burden that must of necessity fall upon the Municipality to provide, and we now find this plea urged in strong and unanswerable terms by another medical contemporary. Let us hope the public press will voice this crying need of Calcutta till the Municipality recognises it, and what is of greater importance, meets it by suitable action.

COMMENTS AND NEWS.

INDIAN HEMP-DRUGS COMMISSION.

AFTER a patient and very careful enquiry into this subject, the Commission find that there was infinitely more sensational description than truth of the excessive use of hemp-drugs, bringing the consumer to poverty and inducing him to crime by creating physical, mental or moral disengagement, and as these drugs afford a harmless pleasure and in some acts as a beneficial stimulant to over a million people in India, who could not well afford any other stimulant, it would amount to oppression to recommend "prohibition," which therefore they put aside and take up the question of control and taxation being carried out on equal footing all over India. Except as concerns the supply (which they would prohibit) from Native states which do not follow the policy of British India, they would remove the import, export and transport duties on hemp-drugs and fixing the maximum of private possession at 5 tolas for *gunja* and *charas* and 20 tolas for *dhany*; they would refuse "sale licenses" to females, and prohibit the sale of the drugs to children or insane persons.

With a view to prevent smuggling, to exercise perfect control by the Government over the supply, and to bring the systems in different parts of India in harmony with each other, the Commission make the following suggestions which the Governor-General in Council approves generally of:—
(1) Free cultivation and manufacture of hemp-drugs be prohibited, and the bonded warehouse system introduced, where a duty of not less than Rs. 50, per maund be levied on *charas* when taken out of bond by the vendors; and where possible *dhany* and *gunja* should pay revenue duty.
(2) Separate licenses by highest-bidder auction should be granted for the sale of the different kinds of drugs, and retail and wholesale licenses not to be granted to the same person.
(3) That when new shops are proposed, municipal bodies, rural notables, tribal headmen or zamindars should first be consulted as to their locality and the necessity of opening them.
(4) The Native states should be asked to co-operate with the Indian Government.
(5) These restrictions to extend to Burma also.

WHEN SHOULD WE OPERATE ON UTERINE FIBROIDS?

WHETHER they be the size of a walnut or as large as a fetal head, DR. WINGLOW ANDERSON maintains that the removal of uterine fibromata is imperative, whenever they cause any of the following symptoms:—(1) Repeated miscarriages and tubal or extra-uterine pregnancies; (2) where the tumor is so large as to interfere with the patient's movements or usefulness, or to seriously complicate child-birth; (3) severe menorrhagia or metrorrhagia; (4) repeated attacks of pelvic peritonitis; (5) severe pain on pressure; (6) malignant or necrotic derangement; (7) cystitis, dysuria, hydronephrosis, severe hemorrhoids, varicose veins of lower extremities, and uncontrollable reflex nervous and nutritive disturbances. He is all the more in favor of early operation, as in many instances delays are dangerous; the risks and difficulties of operation increasing with the size of the tumor, the patient's age, the reduction of her vitality, nutritive disturbances, &c., and while waiting for *vis medicatrix naturæ*, calcareous, carcinomatous, cystic, necrotic, pus-forming and sarcomatous degeneration may occur. Very many observers acquiesce in these conclusions. MARTIN records several cases where fibromata have retrogressed into carcinomatous and sarcomatous degeneration. EBENDORFER claims that the mucosa of a fibroid uterus may become carcinomatous, and LEOPOLD, who noted the same thing, also maintains that fibromata may become fibrosarcomata, a metamorphosis that EMMETT, KLEBS and SIR JAMES Y. SIMPSON have also called attention to. Casually referring to the *thirteen* systems of operation now in vogue; he advocates in favor of making the operation as *rapid* and bloodless as possible, and leaving *very little* cervical tissue (if any be left) in the pelvis, and shewing that the majority of these operations are mere modifications of each other, reclassifies them and gives the following results in which the numerators represent the mortality, and the denominators the number of operations:—Enucleation by vagina, $\frac{1}{11}$; vaginal total extirpation, $\frac{1}{11}$; oophorectomy, $\frac{1}{11}$; myomectomy, or abdominal hysterectomy with intra-peritoneal treatment of stump, $\frac{1}{11}$; and with extra-peritoneal treatment, $\frac{1}{11}$.

KALA AZAR IN ASSAM.

IT was not till near the close of 1892 that *kala azar* was recognised as a distinct disease, and the deaths therefrom separated from those caused by the ordinary types of malarial fever. The figures for 1894 are not yet forthcoming, but as those for 1893 shewed 5,407 deaths from *kala azar* alone, and 9,532 from malarious fevers, including *kala azar*, DR. WARBURTON, the Sanitary Commissioner of Assam, made an investigation from which nothing conclusive was derived, beyond the fact that change of climate, or a sea voyage was without the remedial effect usual in the ordinary types of malarial fever, and he fell into the error of saying that Europeans were exempt, and that efficient sanitary measures were a check, if not a preventive, of the disease. Later on, DR. DODDS PRICE, whose views were supported by DRs. S. O. BISHOP, R. BROOKER, C. J. HANCOCK, J. HEWAN, J. C. LAVERTINE, R. R. SCOVELL, W. H. SHAND, and E. W. WITHAM, stated that though there was a possible probability of malarial poisoning, *kala azar* was no ordinary form of malaria, nor does it respond in the *slightest degree*, to anti-malarial treatment. That appearing as a severe continued fever of 14 to 25 days' duration, and frequent recurrence with a high temperature, enlargement of both spleen and liver, oedema of face and extremities, and sometimes complicated with diarrhoea, dropsy or dysentery, it differs in every particular

from ancylostomiasis, with which it has been confounded, and though prevalent to a great extent in certain districts, where it spares neither young, nor old, strong nor weak, white nor colored, it is entirely unknown in Upper Assam, above Nowgong, but it is certainly and steadily advancing up the valley, Anæmia usually absent in the beginning, becomes more or less marked, as the case progresses, and extreme emaciation often accompanies its termination; but notwithstanding the inability of the patient to digest his food, the appetite remains good to the very last; and it is curious that while the thermometer registers a body-heat ranging from 101 to 102.4°F, the patient often thinks that he is free from fever.

SOME METHODS OF STUDYING CASES.

As increased success means increase of practice, and as therapeutics is to the physician and antiseptics to the surgeon, what logistres and strategy are to the general commanding an army, so DR. GUY C. M. GODFREY enjoins the necessity for a well-balanced mental and physical training to sharpen the diagnostic powers of the doctor, and help him to appreciate that the *careful* study of a case has a two-fold value—an *immediate* one, wherein the patient benefits and the physician gets the culos of being clever, attentive and successful, and a *remote* yet infinite value accruing to the physician himself and aiding him in the treatment of future cases. A knowledge of human nature and an insight into character are essential aids to gauge the mental and physical energy of the patient by giving an idea of his will power, intelligence and self-confidence, and the probability of his following directions regarding rest, medicine, diet or habits.

The *inductive* system of reasoning by assuming that correctness of cause shews correctness of result, and the *deductive* system successively establishes the causes from the results obtained. Therefore from the history of the case before him, the physician obtains certain features enabling him to reason from cause

| To | Symptoms. | Treatment. | Morbid Anatomy. |
|--------------------------------------|----------------------------------|-----------------------------|-----------------|
| To Cause, Treatment, Morbid Anatomy. | Cause, Symptoms, Morbid Anatomy. | Cause, Treatment, Symptoms. | |

and from any one of these back to the other, thus producing proofs that are not merely added proofs; but proofs increasing in regular arithmetical progression. True, all these are not always together needed in every case, nor can they always be reasoned out at the bedside of the patient at one or two sittings, nevertheless they are strong points that should never be lost sight of, and should occupy the mind of the thoughtful practitioner in his leisure moments.

REPORT OF THE BURMAH CHEMICAL EXAMINER.

DURING 1894, the Chemical Examiner for Burma made 1,059 investigations, being:—Customs and excise 148, medico-legal 210, miscellaneous 75, oils 108 and waters 458. Among these were 187 microscopical examinations of stains for blood or semen, and one to see whether two pieces of hair belonged to the same person; 70 cases of suspected human poisoning with 25 detections, comprising arsenic 15, datura 3, other poisons 3, and only one of opium, and two cases for cattle poisoning with one detection only, in which white arsenic was found in the food, but not in the contents of the stomach. With the exception of the opium poisoning, all the other cases shew an increase over previous years. And the waters examined in 1894 exceeded those analysed in 1893 by just 99 samples; but the work is likely to decrease as the customs officials have taken to do their own proof-strength testings, and the water of the jails is to be examined twice a year only instead of four times as has hitherto been done.

THE STRAWBERRY AND SOME OF ITS USES.

Like most other berries and small fruits, strawberries are far more wholesome when eaten alone; but if cream is insisted on, it is better to let each person add it to his dish just before eating the berries, otherwise the cream quickly curdles, rendering the dish unsightly and spoiling the flavor of the fruit. *Good Health* gives us three nice recipes:—

Strawberry Minibe Pudding.—Thoroughly scald a quart of strawberries in a pint of water, sweeten to taste, skim out the fruit, cook the boiling juice with a scant cup of granulated wheat flour (i.e., *Bolong*, or *sojree*) for 15 to 20 minutes, pour over the fruit, and serve cold with cream sauce.

Sago Fruit-Pudding.—Soak a small cup of sago (or tapioca) for an hour or two in just sufficient water to cover it. Drain off the superfluous water. Transfer the sago with $\frac{3}{4}$ of a cup of sugar into a quart of boiling water, and boil till it is perfectly transparent, then pour into it a pint of nicely hulled strawberries (or raspberries or cherries, &c.) stir gently. Turn into moulds to cool and serve with cream.

Strawberry Manioca Mould.—Into half a pint of boiling water place four tablespoonfuls of manioca, and cook till it is transparent and thickened. Remove from the fire, add a tablespoonful of lime juice and a cup of sugar. Place in alternate layers with red strawberries, in a pudding dish. Let it cool until well moulded, and serve in slices with cream flavored with rose.

AMENDMENT OF THE MEDICAL ACTS.

It is apparent that the Medical Acts and the Dentists Act of 1878 were insufficient to meet all exigencies, for under the short title of "The Medical (Unqualified Practitioner's) Act 1893," a draft bill of some 8 clauses is to be put before the Parliamentary Bills Committee for consideration, digestion, and forwarding to the proper authorities for passing and legalising. It provides a penalty of £20 on a summary conviction and a default judgment of 30 days, for using, signing or exhibiting or taking any medical title that one is not duly qualified to use, &c., and imprisonment for one year with or without hard labor, to any such person who is convicted on indictment for causing grievous bodily harm to any one by operation or the administration of some treatment, without being duly qualified to do so. The exceptions that this bill cannot touch are those registered under the old Act, the possessors of a diploma from Great Britain or its affiliated colonial medical colleges, those whose names have been struck off the register as having ceased to practise, and those who possess a diploma granted by any British colony or some other country for practising medicine, &c., shall also be exempted for signing their abbreviated titles and coming to England, provided that they do not carry on or intend to carry on the practice of medicine, surgery &c. in Britain, or have come to the United Kingdom for some special operation.

INDIAN MEDICAL MATTERS IN PARLIAMENT.

AMONG the objects sought for by an early representation to Parliament of India's grievances and India's needs are:—(1) To put a stop to military surgeons going into civil duty, (2) to cause all military surgeons, now in civil work, to return to military duty, (3) to throw the "expert" or specialist's posts and teaching appointments open to competition here and in England, (4) to instal the *Uncoventant* as the nucleus of the *Indian Civil Medical Service*, and to fill up all civil vacancies for the special positions that will be made to this service, and (5) to utilise military surgeons and military assistant surgeons with British and Indian troops under one centralised organisation, tantamount to an amalgamation of these services. This means *REFORM*—and thorough reform

with a stroke of the pen. Yet gently introduced and faithfully adhered to as a policy, it will remove the grievances of India and lower the financial burden of the country in medical matters to an extent that is hardly credible at present.

BALDNESS AND INDIGESTION.

INDIGESTION, that invariable scapegoat, whenever the cause of any disease is obscure, is now called upon to bear the blame of promoting baldness in which it plays only a secondary part. True, careful observance of diet and regularity of meals might prevent baldness, but women who suffer much (their own fault) from digestive troubles are very seldom bald, and we have no evidence that bald-headed men and women are more dyspeptic than their neighbours. Many, and sometimes very far-fetched, are the theories concerning the causation of this condition, the increase of which is co-existent with the general betterment in our social condition; but though nothing is positively known as to the actual causes of baldness, we know that the hair dies that the nobler parts may live up to a proper standard of physiological efficiency, and the majority of opinion inclines to the belief that heredity plays an immensely greater part in baldness than does indigestion.

AN OFFICIAL LANGUAGE.

AN Italian paper announces that a petition, bearing several hundreds of signatures, was lately presented, praying that Latin be made the official tongue of all future congresses. The fact is that the petition referred to was from India, and our readers remember all about it. It was framed by Surgeon-Colonel R. TEMPLE WRIGHT, M.D., I.M.S., and was translated into Latin by Miss FLORENCE HOLLAND M.D., of Allahabad, and the *Record* printed and published it at great expense. The *New York Medical Record* thinks that as Latin is too inflexible, modern Greek is the language best adapted for an international medium of communication. Were either of these suggestions to be carried out, it would necessarily preclude thousands of physicians from association with a congress transacting important business in a tongue with which these thousands are not at all acquainted, but it would give a new impulse to the study of Latin or Greek.

COMPANIONSHIP IN CONVALESCENCE.

SOLITUDE is ill-suited to the sick-room, and nothing would be more irksome in slow or tedious convalescence. Now as the approach to health and its arising incapacity must be reckoned with and provided for, unless we would retard or frustrate the whole process of recovery, it has been suggested at this period, to substitute the sick nurse by a genial and pleasant companion or a judicious friend, so as to afford the social advantages best suited to the needs and wishes of the convalescent. This arrangement especially suggests itself where quarantine or isolation is insisted on for some time after recovery from an infectious disease, and is also advisable on medical grounds in those cases of partial recovery that still require supervision for the completion of cure; but in such instances a trained nurse would be the fittest guardian and companion.

ASEXUALIZATION AND CRIME.

As criminal instincts are unquestionably hereditary, and most of the offences against society originate in sexual disturbance, whether in deprivation or excess, Dr. ROBERT BOAL contends that emasculation and ovariectomy are neither vindictive nor cruel, but that it would certainly exert a deterring influence by limiting the reproduction and transmission by heredity of the defective and criminal classes, and by inflicting a terrifying and abhorrent penalty without destroying life. It would, however, be extremely difficult to get such a law upon the statute books.

THE M. B. DEGREE OF BOMBAY.

In the effort probably of maintaining her proud motto of "Prudentia Fides", and relieving the Bombay College of the charge that the percentage of failure for the higher M. B. examination is abnormally high, because untrained and ill-prepared students get through the earlier tests, which their defective knowledge of English has prevented their properly qualifying for, the Bombay Senate contemplates raising the standard of preliminary general education. But as it unfortunately leaves the all-important preliminary instruction in science in its present unsatisfactory condition, Dr. K. N. RAMADURI points out that it throws a heavy burden on impending medical students by placing them in the awkward position of learning algebra by beginning at equations or surds and indices, or of studying Euclid by starting at the last proposition of the first book. He pleads for a more intimate tuition than formerly, in physiology and histology, without which it is impossible to properly study disease or differentiate diseased from healthy organs, and very naturally wants to know how on earth the Senate can expect to satisfy its incessant cry for "high preliminary culture" without insisting on or affording efficient and practical instruction in the really useful and valuable subjects of biology, chemistry and physics—a sound knowledge of which, not only saves the student's time, but also enables him to earn a high and well-deserved medical degree, as well as facilitates his after-career as a successful physician. He therefore argues the folly of beginning reform at the wrong end, and thinks it were "better far that the present L. M. S. remained undisturbed, than that a fictitious M. B. rise in its place with a P. E. set-off to its shallow and superficial instruction in the scientific and medical course of study."

THE INDIAN MEDICAL SERVICE: A BITTER CRY.

EXPERIENTIA DOCKY writes to the *British Medical Journal*:—"You will be deserving of the everlasting gratitude of young medical men contemplating a career in India, if you will inform them of the following facts, which I make after some years' personal experience in India:

1. The value of the rupee is now 1s. 0½d. (one shilling and a half-penny), and is likely to be less.
2. Two hundred pounds a year in India equals 820 rupees a month.
3. It is absolutely necessary to keep a horse, owing to the relaxing climate.
4. Private practice, except in the very large towns like Bombay and Calcutta, would not pay one's house rent.
5. A medical man, even as a bachelor, cannot live in anything like decent comfort, all reasonable expenses included, for less than 10 rupees (equal to 10s. 6d.) daily; while for a married man without capital it would be impossible; he would be much better off as an assistant in England.
6. The mortality amongst Europeans is just double what it is at home, and when cholera breaks out, the deaths are one in two of those attacked.
7. There are no poor houses in India where a destitute man may seek a refuge.
8. Life in India is not only one of exile, but it is mostly glamour, and of the artificially exalted order, without any real substantial advantages that can be compared with home life." Bravo! So much the better for India.

THE SHORT STORY AND NERVOUS DISEASE.

MONOTONOUS humdrum goodness is without charm, and the utmost tact is required to rouse the nervous invalid from brooding over his sickness, (whether real or imaginary) into taking an interest in his surroundings. One way of changing

the current of unpleasant thoughts, is to present in brief and attractive form, the original and surprising or amusing thoughts of others. This is best done by the short story of the *Harte* style, which unconsciously performs a sort of semi-medical work by capturing the patient's attention without straining it, and leading to a discussion of plot, possibilities, probabilities and character; that, rousing the patient's interest even for a little while, distracts him for the time being from the nervous brooding that might otherwise kill him.

TO BLOW OR WASH THE NOSE.

ACTING as a sieve or filter to the air, as we breathe, our noses become loaded with all sorts of nastiness which sometimes predispose to nasal diseases. The question therefore arises whether we should wash or blow our noses? Our contemporary, the *British Medical Journal*, discovers that the efficacious part of many of the lotions used in nasal affections consists not in the medicine, but in the water they contain. He therefore recommends every one to wash his nose every day by plunging his face into a basin of clean water and taking slight sniffs, in and out, while under water: thus filling and emptying the nasal cavities several times, and cleansing them from the filth contained in them.

STRAINING AND OVER-TAKING OF THE HEART IN ATHLETIC EXERCISES.

THAT athletic exercises, when carried to an extreme, are not free from danger, is amply shown by the investigations of M. TEISSIER, who found that in two-thirds of the subjects examined the patellar reflexes disappeared and the faradaic excitability decreased; but the galvanic contractibility increased, while general fatigue and overtaxing of the muscles, toxic products in the blood, and albuminuria with increased urea, manifested themselves in an appreciable, though variable, degree. The arterial pressure was lowered at least six centimetres, the apex of the heart was lowered, and deviated a little to the right, and the cardiographic outlines showed the brevity of the systole and the sharpness characteristic of the "forced heart beats" described by M. PITRES.

NO FAITH IN INDIAN INCINERATORS.

SAYS *Indian Engineering*:—"A Special Committee has recommended the burial of all garbage collected within the precincts of the Municipality for some years, until incineration or some other method of disposal has proved successful in India. This seems to be a judicious measure for a town like Rangoon, surrounded by vacant and suitable ground for such a purpose. Rubbish trucks on the Burma State Railway carry the town refuse and deposit it 9 miles off."

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:—

- Baroda Prasad Mitra, L.M.S., Civil Surgeon, Mahital, Hyderabad Deccan.
 Maruthvan K. C. Duraisami, C.M.S., D. A. Charitable Disp., Pollachi.
 W. Lindfield Brookes, Asst. Surgeon, Hunter Hosp., Saugor, C. P.
 C. K. Maribusoothana Ram, Hosp. Asst., Spl. Asst. Agent's Establishment, Polanaram, Godavari Dist.
 T. Perumalsami Naidu, Hosp. Asst., Civil Disp., Palayam, Godavari Dist.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

IS THE ARMY HOSPITAL NATIVE CORPS USELESS?

"No words can exaggerate their absolute inefficiency, ignorance, recklessness and utter slothfulness. After visiting eight or ten European armies, I have never seen in any army anything to approach them for hopeless uselessness." This is what an experienced Brigade-Surgeon says of the ward servants of the Army Hospital Native Corps. This is a serious indictment, and the worst part of it all is, says a writer in the *Pioneer*, that we know it to be true.

All we can say is that so expert an officer as Brigade-Surgeon Lieutenant-Colonel G. J. H. EVATT, A. M. S., wrote in these columns in high praise of the Army Hospital Native Corps.

SHORT ITEMS.

Dr. Kedar Nath Das, the Registrar of the Calcutta Medical College Hospital, has had the degree of M.D. conferred upon him for the excellence of his paper on "Puerperal Eclampsia" read at the Indian Medical Congress. Dr. Das is an M.B. of the Calcutta University, and a very deserving young man, and we are glad to see, his merits rewarded in a manner that is certainly unique in the history of our Indian universities.

The new jail at Prome is built in the heart of the town close to the Civil Hospital, and as the prison night-soil is trenched in the intervening space for garden manure, the result may be better imagined than described by those acquainted with even the simplest rudiments of sanitation — *Indian Engineering*.

Surgeon-Major Lenhy, I.M.S., takes medical charge of the party which accompanies Prince Nasirullah, the son of the Amir of Cabul, to England. We wonder why a Government doctor was displaced from his office to fill a purely private appointment!

Surgeon-Captain F. O'Kinealy, I. M. S., will take over medical charge of the 6th Regiment, B. L. I., Fort William, from Surgeon-Captain E. H. Brown, I. M. S., who will proceed to Dinapur, and assume medical charge of the 18th Regiment, B. I.

Dr. Dujardin-Beaumetz, the distinguished French therapist, died at the age of sixty-two, on the 15th ultimo at Beaulieu-sur-Mer, where he was staying in the hope to recruit his health.

The appointment of Surgeon-Colonel A. A. Gore, M.D., Army Medical Staff, as Principal Medical Officer in India, has been confirmed. Surgeon Major-General A. F. Bradshaw, C.B., whom he succeeds, is about to be placed on retired pay.

The Hobart Prize has been awarded to B. Mohamed Usman, a student of the Madras Medical College, the only Mahomedan who passed the Second L. M. and S. Degree examination, held in July last.

A new specific for gonorrhoea is a 1 per cent. solution of cresote in decoction of hamamelis combined with boric acid. It is claimed that this will destroy the gonococci in two hours. — *Specific Medical Journal*.

The friends of Surgeon-Colonel Harvey will be glad to hear that he has already benefited by the sea trip. A telegram reports his arrival at Madras in greatly improved health.

Surgeon-Lieutenant R. K. Mitter, of the 18th Madras Infantry, now at Secunderabad, has volunteered to go with the Chitral force, and his services have been accepted. Dr. Mitter actually volunteered three or four years ago for the Chin expedition, but while his offer was accepted, departmental necessities prevented his being actually sent to the field.

Brusque suppression of the drug, giving a hypodermic only in case of syncope, strong coffee four times daily, the heart-strength being kept up with sparteine two grains, and caffeine ten grains daily. — *Votrin*.

Surgeon-Colonel T. Maunsell, Army Medical Staff, has been appointed Principal Medical Officer, Chitral Relief Force, *vice* Surgeon-Colonel W. T. Martin, Army Medical Staff.

Surgeon-Colonel J. H. Newman, M.D., is appointed to be Administrative Medical Officer and Sanitary Commissioner of the Central Provinces.

Surgeon-Colonel W. P. Warburton, M.D., is appointed to be Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, *vice* Surgeon-Colonel J. G. Pilcher, F.R.C.S.

Dr. W. F. Trouson has been appointed to act as Medical Inspector of Seamen in the Port of Calcutta, during the absence, on leave, of Dr. F. K. Butt.

Miss D'Abreu, M.B., O.M., of Tabor, Yarcand, Madras Presidency, has married a gentleman of the name of Mr. Anderson.

We are sorry to hear that Brigade-Surgeon Lieutenant-Colonel H. B. Purvis is going home ill, in anticipation of leave to be hereafter granted to him.

Oleum ricini heated and thoroughly applied to the abdomen of children, will often move the bowels quite as effectually as when given internally. — *Medical Times*.

Surgeon-Colonel D. O'C. Raye, M.D., is appointed to be Inspector-General of Civil Hospitals, Punjab.

Surgeon-Captain Drury has taken over charge from Surgeon-Major Leahy as Civil Surgeon at Alipore.

Surgeon-Colonel A. F. Churchill, Medical Staff, has been appointed an Administrative Medical Officer in Madras.

We hear that Miss Hamilton, M.D., is to accompany the Afghan party to England, in her medical capacity.

Cholera is raging in Calcutta, over 120 deaths occurring last week from this disease.

The public schools of Calcutta are remarkably free from both cholera and small-pox.

The first P. M. O. of the Bengal Command under the new organisation is Surgeon-Major-General T. Walsh, A. M. S.

John Eric Erickson, F.R.C.S., and John Russell Reynolds, M.D., have been made baronets.

Dr. William Huxley has been granted 18 months' furlough to England, and left Kotah on the 15th instant.

VITAL STATISTICS.

| PROVINCES AND TOWNS. | Population. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population per annum. | NUMBERS OF DEATHS SPECIALLY. | | | |
|---------------------------|-------------|--------------------------------------|----------------------|---------------|------------------------------------------|------------------------------|------------|--------|--------|
| | | | | | | Cholera. | Small-pox. | Fever. | Other. |
| BOMBAY. | | | | | | | | | |
| Urban Calcutta ... | 661,560 | { From 17th Feby. to 16th March '95. | ... | 1,766 | 49.2 | 61 | 430 | 870 | 154 |
| Suburban " ... | ... | | ... | 847 | 52.1 | 58 | 93 | 336 | 124 |
| Patna ... | 165,192 | | Returns not received | | | | | | |
| MADRAS. | | | | | | | | | |
| Madras ... | 452,518 | { From 16th Feby. to 29th March '95. | 1,278 | 1,112 | 82.1 | 4 | 1 | 380 | 190 |
| Trichinopoly ... | 90,609 | | 114 | 306 | 47.2 | 127 | 2 | 56 | 31 |
| BOMBAY. | | | | | | | | | |
| Bombay ... | 821,784 | From 7th March to 2nd April, '95. | 1,048 | 2,106 | 81.69 | 0 | 48 | 540 | 182 |
| N.-W. PROVINCES. | | | | | | | | | |
| Lucknow ... | 244,803 | { For February 1895. | ... | 537 | 26.28 | 0 | 1 | 394 | 22 |
| Bombay ... | 218,168 | | ... | 608 | 84.92 | 1 | 4 | 363 | 71 |
| Cawnpur ... | 183,779 | | ... | 300 | 22.08 | 0 | 0 | 364 | 0 |
| PUNJAB. | | | | | | | | | |
| Delhi ... | 189,648 | { From 27th Jany. to 23rd Feby. '95. | 473 | 349 | 24.2 | 0 | 0 | 179 | 12 |
| Lahore ... | 159,887 | | 458 | 363 | 29.7 | 0 | 0 | 218 | 6 |
| Amritsar ... | 185,401 | | 411 | 429 | 41.2 | 0 | 0 | 219 | 11 |
| ASSAM. | | | | | | | | | |
| Sylhet Dist. ... | 2,154,598 | { For January '95. | 7,218 | 5,404 | 28.92 | 31 | 108 | 2,288 | 548 |
| Kamrup " ... | 634,249 | | 1,456 | 1,401 | 26.52 | 345 | 3 | 776 | 80 |
| Sibsagar " ... | 457,274 | | 1,222 | 1,029 | 27.00 | 26 | 0 | 595 | 200 |
| CENTRAL PROVINCES. | | | | | | | | | |
| Nagpur ... | 117,014 | { From 27th Jany. to 23rd Feby. '95. | 268 | 429 | ... | 0 | 165 | 163 | 7 |
| Saugor ... | 32,796 | | 76 | 76 | ... | 0 | 0 | 40 | 3 |
| BURMA. | | | | | | | | | |
| Rangoon ... | 180,824 | { From 3rd Feby. to 2nd March '95. | ... | 497 | 85.88 | 7 | 0 | 118 | 39 |
| Moulmein ... | 55,785 | | ... | 78 | 18.56 | 0 | 0 | 21 | 10 |

* There were 28, 5, and 14 deaths from *Beri-beri*; and 0, 148, and 1 deaths from *Kala-azar*, in these three districts, respectively.

OUR LONDON LETTER.

(From our own Correspondent.)

THE weather, which was intensely cold, has undergone quite a pleasant change, and while our city has been rejoicing in the sunshine, it is somewhat jarred by the outbreak of influenza and a rapid increase in the metropolitan death-rate. This will give our readers some idea of the present state of climatology in England.

DR. F. T. ROBERTS selected as the subject of the Lettsonian lectures, a somewhat novel text, "On the combination of morbid conditions within the chest"; in the course of these able addresses he makes a clever attempt at classifying these conditions: they are, however, reported as *extensive* in our leading English medical contemporaries.

Among the *on dists* may be mentioned the intention of Mr. McDONALD, M.P., to lay a Bill before the House of Commons with a view to restrict the sale of poisons.

Later, many important articles have been written on the subject of typhoid propagation by means of that savoury mollusc, the oyster. Among these may be noted those of Sir W. H. BAODRENT, M.D., and Sir PETER EADE, M.D., who seemed to think that the oysters became infected by *Escherichia bacillus* while lying in estuaries, just where rivers join the sea, and where it may be stated as a broad

rule that some large main sewer discharges its voluminous contents! This, of course, may be so or not, but many cases of typhoid fever have been apparently traced to such a source. The matter created quite a stir in many circles. In our opinion nowever, we should be inclined to say that the water in which the bivalves were *last* washed, was tainted by sewage containing these particular bacilli. While we are thus running on the subject of *typhoid*, it is reported that some famous Italian experimenters have discovered and demonstrated this self-same bacillus in a far more widely used commodity of food, *viz.*, butter. Another table article, *viz.*, watercress, has come in for its share of suspicion, probably with even more justice than the luscious and succulent oyster. Watercresses, as sold in our London streets, are a most likely means of distributing pathogenic microbes, and this we are even constrained to admit. This vegetable is mostly grown in waterbeds connected with rivers and streams, many of which are only too likely to be contaminated by sewage. Again a large quantity of watercress is grown wild in all kinds of insanitary localities, such as stagnant pools and ditches. It may be delivered as an *assured* axiom, that all water-growing plants are liable to collect a variety of organisms and parasites, due in most instances in this

case, this is not the case. Further, the vegetable is eaten raw, and does not therefore pass through the sterilisation stage of boiling as does much of the human-cooked food, and this sort of boiling it is (as has been hinted by more than one authority, Dr. PATER, &c.) that safeguards man against the organisms of disease in a great measure; it certainly reduces risk in a marvellous degree. Another point may be put forward as follows: The typhoid bacillus external to the body has great adaptability to its environment, and becomes a hardy microbe. Based on theoretical grounds alone, there is no doubt that enteric fever may be spread by the ingestion of sewage-contaminated watercress. Some bacteriological evidence has come to hand, but more such evidence and confirmatory facts must be brought to light ere we might deem it politic to accept these theories as established scientific facts. Doubtless, the key to public safety from a sanitarian's point of view is thorough and searching inspection of all articles of public food. A shrewd contemporary remarks "that it is only by the logical and thorough application of the discoveries of modern science, that England has gained her proud position as the foremost nation in the world in the section of sanitary administration and reform." The dailies which are busy discussing the above and cognate matters, by their tone and attitude, demonstrate the vast interest aroused in all classes touching sanitary reforms.

A party of lay journalists have written what they imagine to be scathingly acute criticism on what they term "so-called medical progress," stigmatising antitoxin as a filthy remedy, without any really clear perception of the why? or wherefore? These pseudo-scientific faddists virtually call down the vengeance of man and Heaven on the experimental physician, who laboriously devotes his days and nights to studies calculated to advance medical knowledge, especially in regard to diseases hitherto regarded as almost incurable. These men are like thistle down before the wind. The watchword of the medical profession ever is, and should be, "excelsior," and these lofty minds may well despise the frenzied outbursts of those who are like the broken reed, and who fall by the weight of their own scurrilous invectives.

At the Workop County Court, a woman claiming to be agent for Count Mattei's so-called remedies, sued a number of persons to recover the price of the same supplied to them by her. His Honor sent the bottles handed in to him for analysis; the County analyst reported that their composition was mere tap-water. Judgment would have been given for plaintiff, but she suddenly withdrew all the actions.

Mrs. GOSLETT has been lecturing under the auspices of "the Dublin Public Health Society" in various parts of Ireland. She is an Associate of the Sanitary Institute. These lectures and the unostentatious work of this little Society, so unobtrusively performed, have accomplished more practical good in Dublin than all sanitary legislation.

Small-pox has assumed somewhat alarming proportions: there being 28 fresh cases in the course of a week with 11 deaths. The guardians have strenuously opposed the adoption of precautions. The medical authorities are looking tight in regard to this serious matter.

Statistics show that there are 600,000 drunkards in England, and that £14,000,000 is yearly expended in

alcoholic beverages, and an equally serious side to the same matter is one which has never been submitted to searching enquiry, viz., the elaborations of those same beverages.

The following is the report of a death during anaesthesia produced by nitrous oxide administered for the purpose of extracting a tooth:—The patient, a girl of 18, recovered consciousness after anaesthesia in about 2½ minutes, but syncope supervened in spite of all they could do, and she died. On post-mortem it was found that her waist and the skin measured 28 inches, although her stays were laced to 18 inches! Liver weight was 9 ounces above normal; it was compressed transversely, left side of heart contracted, right heart dilated.

We have just been chatting over the typhoid question and *apropos* sanitary matters. The last volume of STEVENSON and MURPHY'S comprehensive treatise on public hygiene has just come out. In this section, the public health law of England, Ireland and Scotland is here collected and analysed in such a way, that it goes far to dispel the mysterious intricacies of sanitary law by explaining these points as clearly as possible for the edification of medical men. The editors have sought the co-operation of authorities who are specially engaged in sanitary law work. It is divided into sections. The first deals with law relating to public health in England and Wales; the second with the same subject in relation to Ireland. The third with the sanitary law of Scotland.

MR. JONATHAN HUTCHINSON has revived the publication of his famous "Archives of Surgery;" volume 6 has appeared. This contains a chronology of medicine and surgery from the 15th to the 19th century.

We are told that a discussion on the subject of re-vaccination is imminent: the theory at present suggested is to fix the age at which revaccination should be performed in children, at 12 years, or if there is danger of their being brought into immediate contact with small-pox, the procedure might then be carried out in their 10th year of age, but not earlier.

Much acrimony has been evoked on the score as to whether diplomas should be granted to midwives or not.

DR. GOONSHIR, whose name was brought prominently before the world in connection with the Arctic Expedition for the relief of the *SIR JOHN FRANKLIN Expedition*, (1849) has just died. After wandering through Australia, the South Seas, Russia and Siberia, he returned to Edinburgh, where he has lived in retirement, known only to a small circle of friends. He passed away at the age of 71 years, after a most adventurous life.

THOMAS GORDON HAYE, M.D., who has been better known as a poet than a physician, being the author of "Vates" (1859) was one of the associates of Dante, Gabriel Rossetti, &c. Other works from his pen were "Madeline Parables and Tales &c.," "The Serpent Play &c." He has also published memoirs of 80 years in 2 volumes. He died in London at the age of 86.

Surgeon-General JOHN JAMES CLARKE died at Melbourne. This officer entered the I. M. D. in 1858, retiring with his present rank in 1884. During the Indian Mutiny (1857 to 1859) he served with the artillery under Generals Havelock, Guthrie and Nelly, being present at the actions of Bithoor, Mungwar and Alumbagh. At

the first relief and defence of Lucknow Residency he took part; and was also present during the operations in Oudh, (furnished with 2 clasps.) He also served in the Akha Expedition in 1883-84 as P. M. O., and was awarded a good service pension in 1882. Just a word on another of the deceased worthies of the A. M. D., who have seen service in Hindoostan, viz., EYRE CHAMPION DE CRESTONY, M.B., late of the Bombay service. He has just died in retirement at Beckenham.

The ex-Khedive of Egypt, ISMAIL PASHA, has died in exile.

"The Church Army" have established a free dispensary for women and children (Crawford St., W.). A lady physician is in attendance twice a week to carry on this charitable work.

A small colony of about 40 lepers has been formed at Villuisk, Eastern Siberia, the Russian Government granting an annual subsidy (7,000 roubles), ample enough for the support of 100 of these afflicted beings.

The Right Honorable WILLIAM EWART GLADSTONE has been enjoying excellent health during his visit to the Riviera.

H. M. Queen Victoria is on her way to Italy. Her Majesty has generously contributed £25 to the fund in aid of building-extension connected with the Miller Hospital, Greenwich.

A renowned ladies' doctor was summoned to Monte Carlo by the widow of a millionaire coal-owner. The man of physic has returned to London the richer by a fee of 700 guineas! The *thyroid gland tissue* is still largely prescribed as an active remedy for of myxoedema, exophthalmic goitre, psoriasis, &c., &c.

Messrs. OPPENHEIMER and Co., 14, Worship Street, have further developed the manufacture of their "Bi-Palatinoids" by adding to their number such volatile drugs as ether, chloroform, hydrocyanic acid, chlorodyne, &c. These are remedies of every-day usage, hence their exhibition in this new form, combining purity, portability, and potency with *exact* dosage, (a difficult matter where *volatility* is concerned) will no doubt be welcomed by the medical world meeting, as they do, a distinct want in this direction.

Current Medical Literature.

MEDICINE.

Diagnosis of Pleuritic Effusions.

DULX considering the uniformity of dynamic conditions under which fluid collects in different pleural cavities, H. B. WHITNEY, Esq., M.D., infers *a priori* that such collections have a uniform characteristic shape determinable by percussion and furnishing evidence of a pathognomic, and *more* conclusive character than that obtained by other physical signs, which, though of great value, are not pathognomic; while the other commonly received signs of effusion are for the most part equivocal, and even *vocal fremitus* is of uncertain import.

This characteristic feature is the curve of the upper boundary of *flatness* as elicited by light percussion along a line beginning at the spine, running horizontally for a varying distance, and then dropping by an abrupt curve to the base of the thorax. This curve takes the shape of the letter S, and the larger the effusion, the wider the zone, and the more

anterior the drop—the latter, sometimes, but not always, above the base as far forward as the apex of the heart. This curve can easily be defined by gently tapping and gradually moving the pleximeter finger from the area of absolute flatness toward the area of resonance, and making a mark as soon as the slightest resonance is perceived. Good pulmonary resonance, immediately above this line must not be reflected, and while the slight compression of the whole lung further diminishes the resonance, giving the percussion note a higher pitch and slightly tympanitic quality, resonance over the scapula is never great, and the space between the S curve and the spine ("Garland's" *dull triangle*) is often so dull as to escape recognition, and this important sign of pleuritic effusion may be passed unnoticed by the not over-attentive observer.

The treatment of Dysentery.

SURGEON-MAJOR S. T. AYETOO, of the 1st Baluch Battalion, L. I., sends us the following communication:—"I wish to bring to the notice of the profession a new treatment for acute dysentery. It is not original, but was obtained from a medical work in Persian. This is what the book stated (I translate):—"Treatment for acute dysentery: Reduce cinnamon bark to a fine powder, take one and a half drachms, mix it with a little 'mallai' (the cream which gathers on the top of boiled milk after it is allowed to settle and cool), and administer in the morning on an empty stomach. The patient will be cured. I have made a slight alteration in the above. The powdered cinnamon is given in drachm doses only, mixed with a few drops of water and made into a ball, which is given to the patient to eat, washed down by a mouthful or two of water. This quantity is repeated again in the evening, and so on, morning and evening, until a cure is effected. It is a little over two years since I started this method of treatment, and have cured about thirty cases of the disease. Often patients have been cured by only one or two doses of the drug, while my worst case was cured after five doses only, but a sixth was given to make quite sure. This method of treatment is vastly superior to the ordinary ipecacuanha treatment, in that the medicine is pleasant to take and causes no nausea or vomiting, and acts, if anything, quicker and better than ipecacuanha. If the drug were given in drachm and-a-half doses as recommended in the book, most probably cures would be effected more quickly, but my method has been quite quick enough. The earlier the treatment is begun the quicker the cure."—*Lancet*.

Landmarks of Visceral Disease.

PERITONITIS, which is nature's method of repair, produces exudates, which bury and starve the invading germs—deadly germs—yet it is only a secondary matter, and being resultant on traumatism or disease of the viscera. The *great* peritonitic districts are (a) the pelvis, (b) the appendix, and (c) the gall-bladder; while among the *minor* districts may be classed inflammation round sphincters and along or around the flexures of the colon. DR. BYRON ROBINSON'S autopsies have shown that ALBES had a good deal of truth on his side, when over two generations back he said: "The coccum is the disturbing element in man's trouble in the right iliac fossa;" for the majority of the cases lying on the psoas and iliac muscle which contract and relax during walking, and the irritation caused by these continual movements (during walking) will, if the coccum be congested or inflamed, produce a chemical or mechanical peritonitis, causing exudates which will organise and result in the bands, dense adhesions, and thick new fibrous tissue, so frequently found under the place where the sigmoid crosses the psoas muscle and around the coccum.

Dysentery and Diseases with Complications.

F. S. MORVAN, reports the case of a girl of 30 years. When first seen, she had hydrocephalus; blue, mottled patches on face, legs, arms and back, extreme lividity, nasal gangrene of second toe of both feet, and little or no pain. During the next 74 months she seemed to improve, but three weeks later, she got decidedly worse, constantly complaining of severe pain and a dark blue, almost black, spot is present on each cheek. The hands, wrists, back and hip are of a reddish color. A swelling that made its appearance a little above the sternum, proved to be a diverticulum of the trachea, in the walls of which a vertical slit could be felt. The second toe of left foot is decidedly worse, and of a pure blue color. The urine is free from albumen, blood and sugar, and there is nothing abnormal about the heart. Fever, urticaria, scleroderma, clubbing of the fingers, muscular palsy or wasting and anaesthesia, and swelling of the joints, are all of them absent.

Epilepsy and Typhoid Fever.

In exemplification of the influence of intercurrent ailments upon the frequency of severity of the attacks in epilepsy, **DR. LANNONIS** records the case of a woman who, in consequence of infantile hemiplegia, had become a manifest epileptic since childhood. She first suffered from erysipelas of the thigh followed by typhoid fever. While the erysipelas lasted, the frequency of the fits was considerably lessened, but during the typhoid attack it was greatly increased. He thinks the modification of these attacks depends not on the pyrexia of the febrile, but on the nature of the specific poison, which may either lead to the total or partial suppression of these fits for a time, or increase their frequency.

Morvan's Disease and Leprosy.

WHILE he admits that in some cases of leprosy there may be symptoms closely analogous to those found in some cases of MORVAN'S disease, **M. GOMBAULT** points out that neither pathological anatomy nor biological investigations furnish any confirmation of the view held by some writers that MORVAN'S disease, RAYNAUD'S disease and scleroderma are merely varieties of leprosy. **MARESTANG**, who studied the clinical aspects of this question, declares that MORVAN'S disease and leprosy are by no means identical, and GOMBAULT furthermore shows that the changes in the peripheral nerves that characterize leprosy, are not to be found in MORVAN'S disease, of which (latter) syringomyelia appears to be the anatomical substratum.

Endocardial Lesions in Tuberculous Subjects.

AFTER a long and careful study of this subject, **TEISSIER** concludes that in endocardial lesions due to tuberculosis, the form is multiple and the pathology complex; for while the bacillus acts locally by depleting nutrition and creating a specific lesion which does not cause any characteristic cardiac signs, and very rarely shows itself as granular or caseating nodules, the tuberculous influencing the vaso-motor system is especially active in the sclerosing form, which being the result of slow tuberculous infection, occurs during chronic tuberculosis, and shows itself by producing harsh cardiac murmurs and many of the cases of valvular disease; but instead of acting separately, the tubercle bacilli, toxins and associated bacteria all combine to produce the disease.

Hæmorrhagic Nephritis in Diphtheria.

ON the fifteenth day after using **BEHRING'S** serum in a child of 8 years, **TRYMARK** found albumen, blood, and casts in the urine, and pyrexia together with a mealy eruption were noticed. Four days later there was anuria, and oedema about the eyelids, and during convalescence, hæmorrhagic nephritis, but disappeared in an unusually short time. Later, diphtheritic paralysis supervened in this case. **SCHWALBE**, who maintains that great caution should be used in attributing favorable results to the serum treatment, reports a case where he administered "serum" to a child of 10½ years in whom the hæmorrhagic nephritis appeared on the 25th day, and most of the symptoms disappeared in a week.

SURGERY.**Ophthalmia Neonatorum: Its treatment, prevention and necessity for more efficient legislation to prevent blindness from this cause.**

WHILE many recognized the importance of prophylaxis and had tried pre-delivery disinfection of the vagina of the mother and various applications to the eyes of the newborn, **CREON** was the first to use a germicide, and the majority of the maternity hospitals use his method:—(1) Immediately after birth the child's eyes are carefully cleansed with tepid water every half hour or so; but if there is or any discharge, the eye should be cleaned with a solution of either boric acid or of iodine chloride and then irrigated with lukewarm water. (2) One drop of a two per cent. solution of silver nitrate is allowed to fall upon the cornea. (3) Cold or hot compresses if there is much inflammation; and (4) treatment of the corneal complications.

Switzerland was the first (1835) to legislate for the prevention of blindness from ophthalmia neonatorum, Prussia followed in 1878, Austria 1883, France 1888, New York 1890, Maine 1891, Rhode Island 1893, since which, other cities and states have followed suit. The law provides a penalty of \$100 fine or 180 days' imprisonment for that nurse or midwife who having charge of such infant and noticing such a condition fails to report in writing, within six hours if one or both of the child's eyes are reddened at a time within two weeks after its birth. Universal statistics are not available, but if we consider the United States only, where at the last census there were 50,411 blind persons of whom at least twenty per cent. (10,083) were made blind by neglected ophthalmia neonatorum, we cannot but conclude, says **DR. CHARLES H. MAY**, that the law, as it stands, is ineffective, and that instead of reporting cases to any qualified practitioner of medicine who has not the time to dance attendance on the court in cases of prosecution, the law to appoint proper inspectors to enquire into such cases and demand that written notices of the appearance of ophthalmia neonatorum should be immediately reported to the local health officer or local board of health.

Ligature of Carotid Artery for Cerebral Hæmorrhage.

HORSLEY and **SPENCER**, who found that hæmorrhage in the basal ganglia could be controlled by ligature of the common carotid artery, suggested a similar procedure in cases of intractable apoplexy. This operation was lately performed by **DR. DERCUM** and **DR. KEEN** in two cases, one of whom recovered, and the other, who was too far gone at the time, died. The successful case was that of a man of 50, who on the morning of the 11th February noticed a slight weakness of left arm and in the evening a similar condition of left leg. This one-sided weakness daily increased in such large strides, that on the fourth day there was complete motor palsy of left arm, decided weakness of left leg, paralysis of lower half of left side of face, giddiness, a dull feeling in the head, but no headache or obscuration of intelligence. Albumen was present in the urine in small quantity. The right common carotid was ligatured under the influence of cocaine alone, with an appreciable improvement in the patient in two days' time. He is now able to freely move his left hand and fingers, and there is very little weakness remaining in the affected parts and no anaesthesia. In the other case the weakness began at 2 P.M. in his left arm, and towards evening had involved the leg and face of same side, but paralysis having deepened and unconsciousness supervened during the night, ligature of the carotid failed to relieve him, and he died a few hours later.

and pelvis, and the bladder, which was dilated, hyperemic and congested, and the uterus lying as though down to the lowest impossible in some parts, occupied an abnormal and adherent blood-clot of the size of a large hen's egg. The right kidney was much enlarged and contained several small abscesses, and its pelvis was greatly damaged by extensive ulceration; but there was no appearance in the water of blood staining.

Notes on Pelvic and General Massage.

DR. SARAH M. POST writes that pelvic massage gave her very satisfactory results in propelling the contents of the tubes down through the uterus and securing their discharge without the usual recurring tubal colic, which appears to be due to traction upon the peritoneal attachments in the inguinal region. She thinks that massage is also useful in simple one-sided tubal catarrh. In her opinion the "down stroke" in the usual long rub during the course of a bath is not advisable, as it slows the heart pressure, causing unpleasant sensations, whereas "up" rubbing produces a slowed, strengthened, comfortable pulse, and will be found useful in cyanosis, pulsating jugulars and an overloaded heart.

Vaginal Hysterectomy.

EDBOLLS contends that enucleation of the uterus with ligature of the bleeding vessels only, is the ideal method, and as all further constriction or crushing of tissues is harmful, he utterly discards the French practice of clamping and the German serial ligation of the broad ligaments, except in cases of extensive malignant disease, when it may be necessary to give the uterus as wide a berth as possible.

When shall we operate for Pyo-Salpinx?

IN reply to this burning question that has for a long while perplexed the surgical faculty, DR. CHARLES N. SMITH finds that the most favorable time for operation is after pus-formation in the tube, and before the occurrence of extensive peritonitis. Such opportunities are not however often presented, as in the first place it is not easy to convince people of the danger of these conditions and the necessity for immediate operation to avert the absolute certainty of a more serious condition that may follow, and secondly, peritonitis is either coincident with, or very quickly succeeds the salpingitis, and the whole pelvis becomes blocked by a firmly adherent mass of pus-tube, ovary and bowel. Three alternatives are open to the surgeon: (1) watchful expectancy for the subsidence of the inflammation and diminution in the size of the mass before enucleation, (2) immediate operation with its attendant risks, and (3) puncture either through the rectum or vagina—the latter most often—evacuation of the pus and efficient drainage, which appears to be a much better procedure than laparotomy, even though the latter operation is advised and successfully performed in many such cases by our most prominent gynecologists.

Kraurosis Vulvae.

As cautery, narcotic injections, poultices and baths do but little good in this painful and atrophied condition, MARTIN declares in favor of excision of the diseased tissues together with a small portion of their healthy margins, and subsequent sutures. Eight cases that he treated suffered from dysuria in addition to the leucorrhoea which was accompanied with itching, burning, burning sensations about the vulva, a weak feeling of tension during defecation and micturition, and certain cases absolute pain. While in some cases ugly tumors developed and the pain then, becoming constant, the general health failed.

Ecstasy Generation.

DR. WARRAN does not include sexual pregnancy under this condition, which he divides under three heads: (1) *Ampulla*, which is the most common and beginning in the ampulla of the tube may, in rare instances, go on to full term; or (2) *rupturing into the broad ligament*, it may continue to develop as subperitoneo-pelvic, subperitoneo-abdominal, tubo-ligamentous, extra-peritoneal or broad ligament gestation terminating by hematoma, suppuration, metamorphosis and malppearance or lithopneum formation; (3) *rupturing into the peritoneal cavity*, it may continue as tubo-peritoneal gestation, which may terminate in any of the above ways, or a hematoma-cyst forming, the patient dies either from shock and loss of blood, or from peritonitis; or (c) *the gestation may be destroyed* by tubal abortion or absorption by metamorphosis, etc., after early death, or by the formation of a mole, or a hematoma-plux, or by suppuration resulting in pyosalpinx. (2) *Inter-tubal*: starting in the intertubal portion of the tube. It may go on to full term, or may go on to the same period after rupturing into the layers of the broad ligament, or into either or both the uterine or peritoneal cavities, or the fetus may die early and remaining in the mass, undergo the same changes as in the other forms. (3) *Infundibular*: beginning in the outer end of the tube, or in an accessory tube-entail, merely becoming adherent to the abdominal wall, the ovary or other of the viscera.

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PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Commensalism, Parasitism, and Symbiosis.

WHEN one organism lives in or upon another merely for the purpose of preying upon it, it is termed a *parasite*, but when a mutual or physiological partnership is formed between two beings, the condition is termed *symbiosis*, in which the partnership may exist between two animals or two plants, or one may be an animal and the other a plant, and in some cases the association is so close, that it is almost impossible to determine whether they are two beings or one only. For instance, the minute yellow algae that inhabit radiolarians appear part and parcel of the latter, but can live independent of them; yet while they are together, they continuously exchange compliments, for the algae evolve oxygen, which supplies the chief wants of the radiolarian, which in its turn gives off the carbonic acid and acidized products necessary for the food of the former, and each is protected by the other's company. The term *commensalism* is applied to those cases where the union is much less intimate, though host and great reciprocal services as in the case of the sea anemone, which attaching itself to the shell or claw of the hermit-crab, gets its conveyance free and shares the feast whenever the crab feeds; but he helps the crab in killing or numbing his prey, *hides him when danger threatens*, and carefully assists him in changing his shell when the time comes to throw off the old one. Thus then by showing us the marked interdependence of lesser organisms, these Nature prove to us that we serve ourselves by serving others, and that few indeed, if any, are able to live for and by themselves.

The Compensatory action of the Cerebral Hemispheres.

It is recorded that in left hemi-cranial with impaired speech and writing, the left hand could write better during the attack than after, and in order to demonstrate the compensatory or vicarious action of the inter-cerebral hemisphere during deep sleep, HALLER and MARKOWITZ observed, that sleep

and surface of the tubule, which was dilated, hyperemic and extremely congested, and the mucous lining as smooth as if no almost impossible in some parts, contained an organized and adherent blood-clot of the size of a large hen's egg. The right kidney was much enlarged and contained several small abscesses, and its pelvis was greatly damaged by tuberculous ulceration; but there was no appearance in the water of blood staining.

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Embryologic Speculations.

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is most profound during the first two or three hours, and that as during working hours the strain falls on the right hand, and speech was controlled by the left cerebral hemisphere, the latter would be more exhausted and less accessible than the right, to stimuli during sleep. She found that on tightly twisting either side of the face of the ordinary sleeper, he or she made repellent movements with the left hand invariably, even when lying on the left side, and having to withdraw the hand from under the body; but left-handed persons moved the right limb.

Excretion of Toxic Products.

THE idea hitherto obtained that the toxic substances in acute and chronic disease are *alkaloids* derived from piperidin, but ALBY, who complains of the difficulty of searching for these poisonous products in the excretions (as such large quantities of urine have to be used), says that he found *poisonous alkaloidal substances* in seven cases only (*viz.*, phthisis 3, Graves' disease 2, tetany 1, and pernicious anemia 1), of the many he examined, while the alkaloidal substances found in three cases were not at all poisonous. He points out that a large number of the decomposition-products of albumen have no specific significance when excreted by the urine, and acetone is often a harmless manifestation, but at other times most serious symptoms present themselves, and unfortunately very great difficulty attends the chemical representation of the toxic products of disease.

The Chemical Pathology of Uræmia.

IN a recent experimental study of uræmia, HUGHES and CARTER have contributed to the pathology of this important condition (*Amer. Jour. of the Med. Sciences*). They conclude that there is one poison present alike in uræmic human blood, in dropsical effusions in uræmia, and in dog's blood in experimental uræmia; and that this poison is not one of the ordinarily recognised constituents of the urine, as generally believed, but one whose nature or even existence has not before been recognised. The facts that its action is much lessened after subjection to moderate heat, and that it is not readily dialyzable, seem to indicate that the poison is an albuminous body; while clinical evidence indicates that it is not a constant constituent of the blood, but produces the uræmic condition by accumulation, owing to the inability of the kidneys to excrete it, or more rarely by a sudden and enormous production. The order in which serums stand as to their toxicity, proceeding from the most toxic to the least is, man's, the dog's, the horse's. This suggests to the writers that the origin of the substance is to be traced to the character of the food, which is more nearly carnivorous with man and the dog and purely herbivorous with the horse, and that its production takes place somewhere in the digestive tract. —*N. Y. Med. Record.*

Bacteriology of the Healthy Conjunctiva.

AS the results of experiments made on himself with *Micrococcus candidus*, *Bacillus sporiferus*, *B. fluorescens putridus*, *S. pyogenes albus*, *M. coronatus* and *M. cereus albus*, to determine the effects of microbes penetrating into the healthy eye, S. LACHOWITZ proves that the inoculation exerts neither subjective nor objective phenomena, and that the bacteria completely disappears from the eye within 24 hours after the inoculation.

Bacteriology of Cholera.

KOCH points out that the pathologist has two methods of examination open to him: (1) the naked eye, by which the typical cholera bowel may be seen, injected on both sides, but with large patches of mucous membrane completely denuded of epithelium, and rice-water-like fluid, whilst the typical

cholera stool consists of the same fluid in which the typical flakes are deposited; and (2) the bacteriological, in which one, who has to diagnose cholera bacteriologically, must never give up the examination unless he has been able to acquire the constant practice and the full mastery of the technique of bacteriology essential for the work, as elements of doubt often arise from the unpracticed eye being brought to bear on material that very often widely differs in appearance from that of the true cholera stool, consisting in scanty matter, and containing "mucus flakes" instead of the usual "epithelial debris" with but few comma bacilli; while at other times, the material is indistinguishable bacteriologically, from that of true cholera, and again in other samples, the bacilli may be found in overwhelming numbers, yet so thickly mixed up with other disease germs, as to require considerable patience, care, and skill to properly separate and differentiate.

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Car Ventilation.

IN order to guard against draughts while provided for better ventilation in railroad cars during winter, when the bitter cold necessitates jamming up every possible crack that the biting wind can enter through, and consequently does not provide for the escape of vitiated air from the interior of the compartment, the Master Carbuilders' Association, U. S. A., wish to devise an apparatus that, irrespective of whether the train is moving or standing still, will admit 30 cubic feet of fresh air per passenger per minute, and carry off an equal amount of foul air at the same time. The fresh air so admitted must not come in quicker than at the speed of 4 miles per hour, nor exceed 70°F, nor again be too dry during winter, and arrangements be made for the equal distribution all over the car of this admitted air. In summer the same quantity and speed of air will be required, but the temperature and humidity will be controlled by climatic conditions at the season obtaining.

The Dangers of Street Penny Toys.

FROM England comes a note of warning against the dissemination of tuberculosis by vendors of penny toys, especially those which require inflation to emit sounds or take fantastic form: the method of doing which is exhibited for public bait by the street vendors, many of whom are fitter subjects for the hospital—consumption or otherwise—than for road peddling. We would be remiss in our duty were we to not extend this warning note to India, where the purveyors for the mighty "pice" are not over particular as to their phthisical sufferings, and utterly discard cleanliness of person, &c.; considering the possibility of this easy mode of transferring horrible diseases and the appalling certainty of direct microbial infection, we raise no mere passing scare but point out a most serious danger requiring legal supervision to control and prevent the spread of small-pox, phthisis, scarlet fever and other highly contagious diseases to which our little ones are subjected, whenever we patronise the doubtful wares of the peripatetic proprietor.

"What should be classed as Dangerous Infectious Diseases?"

FORMS the subject of a very interesting paper read before the Congress of the Sanitary Institute, Liverpool, by Dr. JOSEPH PHIBBS, who divides these diseases into two classes:—(1) *Dangerous infectious diseases*, which require for their prevention usual stringent measures for notification, isolation, disinfection, quarantine, medical inspection and

nasal douche or gargle with chlorate of potash and bicarbonate of soda.

Mustard oil has long been known as a deodorant; but *ROSWALL PAIN*, who finds that the ordinary flour of mustard is just as well, recommends it in all cases where foul wounds or discharges have been touched or where other deodorants cannot be obtained. Noting also that while diluted morphine solutions form good culture media for bacteria, pathogenic forms cannot grow in syrups or concentrated solutions, he regards sugar as an useful antiseptic, and suggests its application to surgery, stating that he has used powdered sugar with very good results in compound fractures.

Phenacilin in 10 to 15-grain doses very often relieves acute sciatica and makes the patient feel quite comfortable, but if the pain is severe, injections of morphine will thoroughly arrest it.

Lanoline melting at the temperature of the interior of the body, Professor LANG prescribes it in combination with sugar of milk, which easily dissolves in the gastro-intestinal juices, as an excipient for mercurial and arsenical salts in the treatment of syphilis, as he finds that by this means one may feel certain that the quantity of the drug ingested will be absorbed, as no particles of them can pass through the digestive tract unaltered.

Antipyrine has been very successfully used by F. ARNSTEIN in the treatment of pruritus nervosus, and inveterate pruritus scabiei of rather long duration. He gave it in doses of 15-3 grains (i.e., 1 gramme) at bed-time.

Chloroform in doses of from 8 to 10 drops, three times daily markedly improves all the functions of the stomach. It may therefore be advantageously given in the treatment of dyspepsia and various gastric disturbances—V. G. STADNITZKY.

Antipyrin mandolate, a new preparation obtained as crystals by adding antipyrin to mandelic acid, was tried by BENN in 60 cases of whooping cough in children of various ages. With the exception of two failures, it gave excellent results and shortened the duration of the disease. For infants under 1 year he gave 0.05 to 0.10, and for children between 3 and 5 years 0.25 to 0.50 *grm.* No unpleasant nor untoward symptoms were noted.

Morphine, which as a rule, is a slow-acting poison if injected hypodermically into the muscles, will be excreted into the stomach by osmosis, which rules that more morphine will be excreted if it be decomposed as soon as it passes into the stomach. Here then comes the value of *permanganate of potassium* which, though a poison subcutaneously, may be given by the stomach with perfect safety in 1 per cent. solution, whose action is not interfered with by food-stuffs or acetic acid, and if given while morphine is in the stomach, it is an efficient antidote, which completely decomposes grain for grain the morphine.

See air, according to the observations of LINDEMANN, permanently reduces the skin-temperature, and by virtue of its mechanical mixture with salt, acts as a powerful stimulant, whose effect is most marked in persons accustomed to town or country air. The circulation improves, shewing a slower pulse with higher and steeper curves and occasioning longer and deeper inspirations.

Electricity directed by discharge of the electrostatic brush on to the face of a person placed in a properly insulated position, gave LANGE immense satisfaction in the treatment of obstinate migraines that defied all other modes of treatment.

Correspondence.

DR. CROMBIE ON QUARTAN AGUE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Will you kindly allow me space for a few words in defence of my letter on "DR. CROMBIE ON Quartan Ague" against the attack made by Babu AMRITO LAL MANDAL in your issue of the 16th March?

Babu AMRITO says: "I was also for sometime at Dinajpur, &c., &c. Out of not less than 750 ague cases which came under my treatment, none gave a history of quartan ague." I think Babu AMRITO knows Dr. PURNA CHANDRA SEN of Dinajpur, who for the last twenty years has been in charge of the Dinajpur Sadar Dispensary, and than whom a more experienced man cannot be found in Dinajpur. He told me the other day that every year fully 50 cases of quartan ague come under his treatment in the dispensary; and during his twenty years' service in Dinajpur, he has treated at least 1,000 cases of quartan ague.

I wrote in my letter, "they get the paroxysm every third day, the interval being seventy-two hours." This is Dr. ROBERTS' definition of quartan ague, which Babu AMRITO does not seem to understand. According to Dr. ROBERTS the paroxysm of quartan ague takes place on every third day and not on every fourth day as AMRITO Babu says. He further asserts that the interval of quartan ague is "two clear days," which is equivalent to forty-eight hours; but according to Dr. ROBERTS, the interval of quartan ague is seventy-two hours. My friend should know that interval means the whole period between the two paroxysms, and includes (but does not exclude) the fever-period. In quartan ague, the paroxysm appears on the seventy-second hour, consequently, according to Dr. ROBERTS it is on the third day, had the paroxysm appeared on the seventy-third hour, then it would have been on the fourth day. Most emphatically, I again assert, without fear of contradiction, that here at Raiganj, quartan ague is very common. I admit that generally, in order of frequency it takes the last place, but it is not so rare in this country as Dr. CROMBIE thinks it to be. There is a village near Raiganj named Elinga where quartan ague is so common, that I think there it takes the first place in order of frequency.

In conclusion, I regret that I cannot follow the advice of my professional brother by giving up my idea of quartan ague. He may think that I am wrong, but I must sincerely and firmly believe that I am right.

I regret the tone of AMRITO Babu's letter, and I advise him, as a friend, to be more moderate and polite in his expressions in future.

Yours, &c., HARA KALI SEN, V.L.M.S.
RAIGANJ, 21st March 1895.

II.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In the *Indian Medical Record* of the 16th ultimo, BABU AMRITO LAL MANDAL has taken BABU HARA KALI SEN to task for his differing in opinion from himself and Dr. CROMBIE "with regard to certain points in connection with quartan ague." From his experience in the Dinajpur District where he failed to come across any cases of quartan ague, he boldly defends a sweeping

statement that "quartan type of intermittent fever is very rare in India." This kind of generalization is, in the very face of it, neither fair nor logical. Has BABU MANDAL any experience of the existing state of things in the Punjab? If not, I would ask him to make a sojourn in the villages of this part of the Punjab during the cold weather, and he will be perfectly convinced of the truth of the statements I am going to make for his edification. Intermittent fevers of the quartan type were not much heard of ten or twelve years ago in this province, but MANDAL Baba will be able to form some idea of the alarming extent to which this quartan ague has been prevalent here during this decade, from the simple fact that I have treated from 4,000 to 5,000 cases per annum at the medical hall of Messrs. RAJKISSEN MOOKERJI & Co., Chemists, Umballa, for the past 12 years. A simple calculation will show that the total number of cases treated, ranged from 48,000 to 60,000 during a period of twelve years. A little enquiry will further satisfy BABU MANDAL that similar numbers were treated in each of the various medical halls in Delhi, Meerut, Saharnipore, Ludhiana, Umritsar &c., not to speak of the very large numbers who flock to the charitable hospitals, and many others treated by native *hakims* and *vaides*, and many treated gratis by private individuals. I should not omit to mention that this quartan ague is most prevalent during the cold weather, when it rages in an epidemic form in the villages of the Punjab, and many persons succumbed to this fever in the interior of the province, where medical aid was not procurable. As for the quartan type of the fever, BABU MANDAL should rest assured that it is no other. The paroxysms recur on the fourth day after perfect intermission of two clear days during the interval. The villagers have an uncommon dread of this quartan ague, which, according to their nomenclature, is styled "chauthia" or the fourth and sometimes "burra bukhar" or the great fever. I have seen a few instances where the simple villagers, in the absence of any other medicine, had recourse to opium with success in preventing an attack. With due deference to the professional attainments of DR. CHOMBE, I beg to suggest that the state of affairs in the Punjab has not probably come within his cognizance.

Yours, &c., BHAGAT RAM,

Hospital Assistant, in charge of
the Royal Medical Hall.

UMBALLA, 20th March 1895.

III.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In your issue of the 16th March last, I am deeply sorry to read the cutting remarks made by BABU AMRITA LALL MANDAL of Jalpaiguri in reference to what is stated by BABU HARA KALI SEN of Raigunj in the issue of the 16th January. DR. AMRITA LALL seems to belong to the class of men who are very fond of following the footsteps of others. He does not like to exercise his own independent views and experiences regarding a medical question. He seems to have been horrified to observe that a V. L. M. S. has contradicted a statement made by an M. D., a member of the Indian Medical Service, and certainly a great authority on medical sciences. DR. HARA KALI has simply stated what he has seen with his own eyes, and this is certainly not making a "mountain out of a molehill."

DR. SEN has clearly stated that his patients get the paroxysm every third day at an interval of 72 hours. I must say this is quite correct, if DR. AMRITA LALL will kindly accept ROBERTS' "Practice of Medicine" as an authority on the matter.

DR. MANDAL asserts that he could not find a single case of quartan ague among the 750 patients that came under his treatment. It was, most likely, because he did not classify the cases as to whether they got the paroxysms every day, every other day, or every third day.

In conclusion, it seems to me that Civil Hospital Assistant BABU AMRITA LALL MANDAL and V. L. M. S. BABU HARA KALI SEN are both men of equal qualifications; hence if one derides the designation of the other, he derides himself.

Yours, &c., RATI KANTA MOZENDAR,
Medical Practitioner.

CHAURHAURI DISPENSARY, JAGATI P. O., 18th March 1895.

[In order to settle once for all this controversy on "Quartan Ague," and for the information and satisfaction of both dispensers, we append the following official definition of "quartan ague" as taken from the latest (11th) edition of HOBLYN and PRICE'S Dictionary of "Medical Terms":—

"QUARTAN AGUE.—A species of intermittent fever, in which the intermission is generally about 72 hours, the paroxysms commencing in the afternoon; the usual duration being under 5 hours. The varieties as given by MAISON GOOD, are:—

1. The double quartan, in which the paroxysms of the one set occur in the intermissions of the other, evincing a difference of duration or of violence, with an interval on the 3rd day only.
2. The triple quartan, consisting of a single quartan with regularly recurring paroxysms, while each of the intervening days is marked with a slighter or separate attack.
3. The duplicate quartan, consisting of a single quartan, with two paroxysms on the regular day of attack, the intervals being of ordinary length.
4. The quartan, consisting of a single quartan with three paroxysms on the regular day of attack, the intervals being undisturbed, (i.e., 72 hours).—ED., J. M. K.]

—:O:—

DISINFECTION AND SMALL-POX.

TO THE EDITOR "INDIAN MEDICAL RECORD."

SIR,—Small-pox is associated with such horrors by those who know nothing about it, that its advent is a signal for wholesale desertion by friends, acquaintances and debtors, but not creditors! Accepting without assent or dissent, its general hypothesis of contagiousness, I would naturally ask how, with so eminent a sanitarian and analytical chemist as DR. W. J. SIMPSON at its head, the Calcutta Health Department should relegate the important work of disinfection to illiterate *dhangaris*, and employ in conjunction with each other, disinfectants that, while powerfully acting by themselves, vitiate and utterly destroy each other when combined. S. P. favored me with its unwelcome visit, and in due rote, municipal disinfection was thus effected:—A man came armed with a *belli* (metal bucket) containing carbolic powder, 1 oz of roll sulphur, a broken-necked phenyle bottle and a phial of bichloride solution. The doors and windows (except one) of the infected room having been closed, carbolic powder was freely sprinkled over the floor damped by a spluttering of phenyle in aqueous solution; half a dozen syringefuls of bichloride solution were squirted over decantary portions of the walls, and after turning up his nose and repeating the chlorine-generator that I had two days previously "started to work" in that room, the man placed a lighted coal stove on the floor on which he threw a lump of roll sulphur and walked out of the room, leaving the exit door wide open. His work was done (in 1/4 an hour), and

...the powder of sulphurous acid gas, ... of the light of his countenance.

Note the error.—The room was about 50 feet by 14 feet by 25 feet, or 1750 cubic feet capacity, and to disinfect this there was used about 2 lbs. of carbolic powder (i.e., 196 grains of carbolic acid crude, mixed up with lime and powdered earthy rubbish), 1½ ounce phenyle, (containing about 15 per cent. phenic acid) 8 ounces bichloride solution, (representing 78 grains of corrosive sublimate) and sufficient sulphur to generate 200 cubic feet of sulphurous acid gas; but sulphuric acid has a greater affinity for lime and dissolved mercury, and while every chemist knows that sulphate of lime and mercuric sulphate are not true disinfectants, it is equally admitted that carbolic acid and its admixtures have no influence on small-pox virus: Consequently that room was not properly disinfected, and the Municipal energy and material were practically wasted, while in the public interest I felt myself compelled to seal that room up for two whole days during which it was exposed to the slow but sure action of bleaching powder solution placed over a small stove so as to hot-moisten the air which was thus properly exposed to the full action of the liberated chlorine, which is one of the most powerful germicides known, and which process cost me the enormous sum of four annas (about four pence), while it gave fifty times better results than the Municipal method above detailed, (which could not have been executed at a cost of less than 20 annas.)

With this advantage also, that while sulphurous acid attacks and destroys paint-work, &c., and for several hours after use, stinks out the place in which it has been employed, chlorine liberated from bleaching powder gives the room a peculiarly pleasant odor, and does not destroy furniture, &c.

Yours, &c., ROGER G. S. CHEW, M.D., &c.,

Late Analyst to the Corporation of Calcutta.

CALCUTTA, 12th March 1895.

A PRESCRIPTION FOR DYSENTERY.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

Sir,—The prescription for dysentery which Hospital Assistant Sukdeo Das sent you, and which appears in the *Record* of the 1st instant, is not what I am in the habit of prescribing. Would you therefore kindly make a correction in an early issue?

This is what I give, and it always succeeds in the malarial form of the disease:—

| | | |
|--------------------|-----|---------|
| R. Ammon. Chlorid | ... | grs. v. |
| Pulv. Ipecac. Rad. | ... | grs. v. |
| Tinct. Opi | ... | ℥ss—xv. |
| Mucil. gum. ac. | ... | ℥i. |
| Aq. Cinnamon | ... | ad. ℥i. |

Sig: One such every four hours. I also give 5 grs. of quinine morning and evening.

Yours, &c., R. K. TANDAN, M.B., C.M. (Edin).

Medical Officer.

BALESTON, 19th March 1895.

CHOLERA AND QUARANTINE.

DEBATA.

SERGEON-CAPTAIN P. W. O'BRIEN points out a typographical error in his letter in our issue of the 1st March, the occurrence of which we much regret:—

| | | |
|-----------------------|-----------|-----------------------|
| Dr. Lanson | should be | Dr. Lanson |
| Mr. Farnel | " | Mr. Farnel |
| Communicable | " | Water-communicable |
| Case of communication | " | Ease of communication |
| International | " | Internal |

Lastly.—We have omitted to mention that his paper on *Cholera and Quarantine* was contributed to the Indian Medical Congress.

REVIEWS.

THE ELEMENTS OF PATHOLOGICAL HISTOLOGY, with special reference to practical methods. By Dr. Anton Weichselbaum, Professor of Pathological Anatomy, and Director of the Institute of Pathological Anatomy in the University of Vienna. Translated by W. R. DAWSON, M.B. (Dub.) Demonstrator of Pathology in the Royal College of Surgeons, Ireland; Late Medical Travelling Prizeman of the University of Dublin, &c., &c. With illustrations. (Published by LONGMANS, GREEN & Co., London and New York, 1895.) Price £1. 1 net. Pages 456.

This great work is beyond criticism. In its scope, aim, and embodiment it stands unique. We may therefore *ab ovo* dismiss any thought of criticising it. It affords us much pleasure to point out its many excellences. It is a work of well-established reputation in Germany, and Dr. Dawson, in translating it for English readers in so able and masterly a style, has undoubtedly earned the gratitude of the whole English-speaking *mundus medicus*.

Here are given, concisely and briefly, the doctrines of the science and the most practical and approved methods of investigation.

An important addition to the above are *pathogenesis and etiology*, which render this treatise unique; particular regard being also paid to the *diagnostic* value of the methods of investigation discussed, not only for purely pathological, but also for *clinical* purposes. These methods are noted under two heads, *viz.*: (1) *General* methods, (part I) and (2) *Special* methods (parts II and III). Of course, only those methods are described which accomplish their purpose of investigation for the practical study of this science, with the greatest speed and certainty. Only in a few instances have several methods been given together, in order to enable the student to compare results.

References to authorities and literature have been judiciously omitted, and their place has been taken up with suitable illustrations (drawn from actual preparations and therefore true to nature) because "suitably-chosen illustrations produce a clear conception of facts much more quickly and certainly than even the most accurate description." These figures and drawings have been produced free from all diagrammatic representation, and with a fidelity to the actual pathological conditions presented, which is photographic.

There are eight plates introduced in the work, the first one being: beautifully tinted; (after Kien) and the

specimens of the epidermis, taken on erythrasia plaques and the griseo ketow blotch. These photographs are made from actual cover-glass preparations, stained with fuchsin and mounted in Canada balsam, and were all taken in direct sunlight. Their rare excellence must be seen to be appreciated; to say that they are beautiful, etc., falls far short of doing them justice.

The work has been thrown into chapters, the practical portions having been printed in smaller type than the descriptive, in order to facilitate reference. To complete the work, a concise and full description of the pathological histology of the ear has been appended. Altogether, the volume is beautifully got up and wonderfully up to date (especially in the sections devoted to bacteriology). It is sure to take a foremost place among contemporaneous literature on pathological histology, being thoroughly accurate and complete.

A MONOGRAPH ON DISEASES OF THE BREAST, their pathology and treatment. With special reference to cancer. By W. Roger Williams, F.R.C.S., Late Surgeon, Western General Dispensary, and Surgical Registrar, Middlesex Hospital. With 76 figures. Pages 572. (Published by JOHN BALE and SONS, Great Titchfield Street, Oxford Street, London, W.) 1894. Price £ 1-1-0.

This excellent monograph on *Diseases of the Breast* by DR. ROGER WILLIAMS, consists of 572 pages, and is divided into 25 chapters. It is a most exhaustive and comprehensive work on the subject, and one that will well repay perusal. Treating as it does mammary diseases, in all their multitudinous varieties, the volume opens with the origin of Mammary mamme and their phylogeny, then goes on to discuss their morphology, variations from normal structure, (e.g., amazia, athelia, polymastia. "Mamme Erraticæ" &c.) and their hypertrophy. Next in order, the vast subject of NEOPLASMS is taken up, beginning with Cancer, with special reference to the microbe theory. The pathogenesis, morphology, general pathology, varieties and treatment of acinous cancer are all fully discussed (including the so-called villous duct cancer, and cancers of the mammary integument and of the male breast). The next subject treated is *Sarcoma* (fibro and adeno-sarcoma) and finally, the remaining neoplasms such as lipoma, angioma, chondroma, non-malignant and cystic tumours, inflammatory and suppurative diseases, tubercle, syphilis, traumata and neuroses are each taken up and very fully and ably treated each under its separate heading. But little of the *labor limæ* is required to render the work under review perfect.

DR. ROGER WILLIAMS has set himself a very laborious and onerous task, which he has performed in a most able, succinct and scholarly manner. The treatise is printed in large type (illustrative cases being given in small type), and profusely illustrated. The number of authorities to whom reference is made, indicate that the author has spared no pains to bring his monograph thoroughly up-to-date by widely consulting every possible authority on the subject. We would point out one small typographical error on page 40, line 28, where the word "hesitate" is spelled "hesite."

Government Medical Gazette.

GOVERNMENT OF INDIA.

Surgn.-Capt. A. W. T. Most Sparks, M.B., I. M. S. (Beng), is placed temporarily, at disposal of Govt. of Punjab, Surgn. Maj.-Genl. James Clegburn, M.D., is apptd. to be Surgn.-Genl. and Sany. Commr. with the Govt. of India, in succession to Surgn. Maj.-Genl. W. R. Bice, M.D., C.A.I.

Surgn.-Col. D. O'C. Rye, M.D., apptd. to be Inspr.-Genl. of Civil Hosp., Punjab.

Surgn.-Col. J. H. Newman, M.D. apptd. to be administrative Med. Offr. and Sany. Commr. of the Central Provinces.

Surgn.-Col. W. P. Warburton, M.D., apptd. to be Inspr.-Genl. of Civil Hosp., N.W.P. and Oudh, vice Surgn.-Col. J. G. Pilcher, F.R.C.S.

Surgn.-Maj. W. H. Nelson, I. M. S. (Madras), replaced temporarily, at disposal of Mlly. Dept., for employment as garden duty, from date of relinquishing charge of duties as Offg. Agency Surgn. at Alwar.

The undermentioned mlls. Pupils having passed their final exam. are admitted into the Sub. Med. Dept. as 3rd class Mlls. Asst. Surgn. from 5th Feby. 1894:—Etwia Seymour Pushong, George Williams Cearns, James Joseph McDonald, Clarence John Williams, Walter Reginald Rebeiro, Joseph Patrick Carey, Frank Ernest Knight, William John Marshall, William George James Thompson, John Douglas Thomas, Sydney Graham Langhorne, Frederick William Mathews, William Willoughby Stuart, George Nicholas Xavier, David Davis, Edward Aubrey Davies, Benjamin Lazarus Smith, Herbert Charles Thompson, Adolphus Vincent Bates, William Henry Brown, Gilbert Reuben Joseph Hanvey, Charles Robert Coxe, Richard Julian Key Stone, James Doyle, Frederick George Cutler, Louis Percival Kenyon, Edmund DeRoche, Henry Alexander Greene.

Brig.-Surgn. Lieut.-Col. Archibald Cameron, M.D. Civil Surgn., Allahabad, is permitted to retire from service, from 1st April.

Surgn. Lieut.-Col. Alexander Bannerman Strahan, M.B., has been permitted to retire from service, from 11th Feby.

Hosp. Asst. Motilal Delpatram and Mohanlal Nagardass were apptd. as 3rd class Hosp. Assts. and placed on the Native State's Reserve List from 20th Nov. and 6th Dec. 1894, respectively.

Hosp. Asst. Mahomed Ally Khan, attached to the Shahabad Dispy. in Jhalawar, died on 17th Dec. 1894.

The following transfers have been made in the establt. of Civil Hosp. Assts. in Rajputana:—Erwut Ullah, from Chaoni Dispy. to Kota Main Dispy., 20th Nov. 1894; Hafedzullah, from Kotah Main Dispy. to Ajmere Charitable Dispy., 28th Nov. 1894; Ashgarali Khan, from Ajmere Charitable Dispy. to Rajputana Agency Hosp., Abu, 10th Dec. 1894; Kamal-ud-din, from Rajputana Agency Hosp. pensioned, 1st Nov. 1894; Shib Ditta, from Mandana Dispy., Kotah, to Chaoni Dispy., 20th Nov. 1894; Abdul Wahid, from Mauli Ry. Dispy., Meywar, to Pertabgarh Dispy., 25th Jan.; Kehal Singh, from Pertabgarh Dispy. to Pertabgarh Raj Service, 25th Jan.; Habibur Rahman, from Govt. Reserve List to Kotah Raj Service, 1st Nov. 1894; Channil Lal, from Native States Reserve List to Meywar Raj service, 28th Nov. 1894; Syed Muzhar Ali, from Govt. Reserve List to Marwar Raj service, 20th Nov. 1894; Syal Mahomed Raza, from Native States Reserve List to Bikanir Raj service, 7th Dec. 1894; Prikamlal Maganlal, from Marwar Raj Service to Native State's Reserve List, 22nd Dec. 1894; Hurlao Pershad, from Native State's Reserve List to Marwar Raj Service, 1st Jan. 1895; Abdullah Khan, from Randhal Dispy. to Jaypore, Native State's Reserve List, 8th Jan.; and Allimullah, from Native State's Reserve List to Bandiqui Dispy., Jaypore, 8th Jan.

Hosp. Asst. Abdul Hamid, Native State's Reserve List, two months' priv. leave, 8th Nov. 1894 to 1st Jan. 1895.

Hosp. Asst. Hardeo Pershad returned on 17th Dec. 1894 from leave.

Hosp. Asst. Haripada Mukerji returned on 30th Nov. 1894 from leave and Hosp. Asst. Abdul Hamid reverted to Native State's Reserve List.

Hosp. Asst. Abdul Rahim, Manipura Dispy., in Jaypore, granted two months' priv. leave from 1st Dec. 1894 to the 29th Jan. 1895.

Hosp. Asst. Ali Hussain, Mangral Dispy., Kotah, two months' priv. leave from 14th Sept. to 13th Nov. 1894.

Surgn. Asst. Gannabram Nambheram, Rajahmundry Jail Hosp., Rajahmundry, priv. leave for two months from 2nd Jan'y. to 26th Feb'y.

Asst. Surgn. Bhan Narain, I. Native State's Reserve List, fifteen days' priv. leave, from 12th to 26th Feb'y.

Surgn. Asst.-Col. A. Scott Reid, M.B., I. M. S. (Beng.), assumed charge of Quota on 10th March, relieving Surgn.-Capt. W. E. Edwards, M.B., on leave.

BENGAL GOVERNMENT.

The services of Surgn.-Capt. A. W. T. Baist-Sparks, M.B., I. M. S. (Beng.) are apptd. temp'y. at disposal of Govt. of Bengal.

Asst. Surgn. Ananda Lal Bose, of Outtock Genl. Hosp., held med. charge of civil station of Outtock from 18th to 26th Feb'y. in addition to his own duties.

Surgn.-Maj. J. O. Harwood, M. S., apptd. to charge of Dum-Dum and to be Med. Offr. Eastern Bengal State Ry. in addition to his own duties, from 1st Feb'y., till the date of his relief by Surgn.-Lieut. E. M. Morphew.

Surgn.-Lieut. E. M. Morphew, M. S., apptd. to have charge of Dum-Dum, and to be Med. Offr. Eastern Bengal State Ry. in addition to his own duties.

The services of Surgn.-Maj. A. W. D. Leahy, Civil Surgn. of the 24-Parganas, placed temp'y. at disposal of Govt. of India in the Foreign Dept.

Surgn.-Capt. F. J. Drury, Resident Physician, Med. Coll. Hosp. and Professor of Pathology, Med. Coll., apptd. to act as Civil Surgn. of the 24-Parganas, during absence, on deputation, of Surgn.-Maj. A. W. D. Leahy.

Surgn.-Capt. F. P. Maynard, Offg. Civil Surgn. of Darbhanga, apptd. to act as Resid. Physician, Med. Coll. Hosp., and Profr. of Pathology, Med. Coll., Calcutta, during absence, on deputation, of Surgn.-Capt. F. J. Drury.

Surgn.-Capt. G. J. Jordan, Offg. Civil Surgn. of Backergunge, apptd. to act as Civil Surgn. of Darbhanga, during absence, on deputation, of Surgn.-Capt. E. H. Brown.

Surgn.-Capt. A. W. T. Baist-Sparks made over charge of the Jalpaiguri Intermediate Jail to Baba Deno Nath Dey on 22nd March.

PUNJAB GOVERNMENT.

Surgn. Lieut.-Col. J. O'M. MacDonnell, Civil Surgn., Rohak, furlough for four months and twenty-five days from 2nd March, reported his departure from Calcutta on 6th March.

Surgn.-Capt. C. H. James, on duty with the Siny. Commr., Punjab, is apptd. to officiate as Civil Surgn. of Rohak from 6th March, on which date he relieved Asst. Surgn. Mehr Chand, I. transferred.

Asst. Surgn. Mehr Chand, I., on genl. duty at Delhi officiated as Civil Surgn. of Rohak from 2nd to 6th March.

Hosp. Asst. Shekh Ahmed, Kurrang Dispy., Gradient Divn., N.-W. Ry., two months' priv. leave from 18th March.

Hosp. Asst. Karm Chand, from Syadwala Dispy., Montgomery Dist., to Montgomery Central Jail, on 7th March, relieving Hosp. Asst. Basant Rai.

Hosp. Asst. Basant Rai, from Montgomery Central Jail to Syadwala Dispy., Montgomery Dist., on 13th March.

Hosp. Asst. Chirag-ud-din, from Rawalpindi to Mong Dispy., Gujrat Dist., on 14th March, relieving 3rd class Hosp. Asst. Ghasita Mal.

Hosp. Asst. Ghasita Mal, from Mong Dispy., Gujrat Dist., to Muzee Dispy., on 18th March, relieving Hosp. Asst. Agia Ram.

Asst. Surgn. Mehr Chand (I) from Delhi to Bawari Dispy., on 18th March, relieving Asst. Surgn. Alla Ditta.

Hosp. Asst. Badr-ud-din, Pakpattan Dispy., Montgomery Dist., three months' priv. leave, and was relieved of his duties on 14th March by Hosp. Asst. Lahoria Ram, transferred from Faranpore.

Hosp. Asst. Sobha Singh resumed charge of Gujrat Khan Dispy., Rawalpindi Dist., on 18th March, relieving Hosp. Asst. Govardhan Das, who reverted to Rawalpindi Civil Hosp. on 18th March.

Hosp. Asst. Tuls Ram, N.-W. Ry., Nowshera, three months' priv. leave, and relieved on 12th March by Hosp. Asst. Haid Ali, transferred from Lahore.

Asst. Surgn. Balu Singh, from doing genl. duty, Mookan, to N.-W. Ry., Bhakkar, on 18th March.

MADRAS GOVERNMENT.

Surgn. Capt. F. J. Crawford, furlough on (M.S.) for one year.

Surgn. Capt. David Simpson, M.B., to be Surgn. Genl. with the Govt. of Madras, sub. pro tem. during employment of Surgn.-Maj. C. M. Thompson, M.B., on other duty.

Surgn.-Capt. Charles Louis Williams, M.B., to act as Asst. Surgn. Genl. Hosp., during absence of Surgn.-Capt. F. J. Crawford, M.B., on leave.

Asst. Surgn. Charles Arthur Latsonale to be Additional Medical Officer, Ootacamund, for six months, from 1st April.

Asst. Surgn. Cornelius Theodore Saldanha to act as Civil Surgn., Tellicherry, during employment of Surgn.-Capt. D. Simpson.

Civil Apothy. William Thomas Kenny, L.M.S., to act as Asst. Surgn., Nellore, during employment of Asst. Surgn. Saldanha.

Surgn.-Capt. Clarence Forbes Fearnside to be Asst. of the Cannanore Central Jail.

Brig.-Surgn. Lieut.-Col. J. Smith, I. M. S., Madras is permitted to retire from the service on a pension of £500 per annum from 1st April.

Surgn. Lieut.-Col., W. O'Hara, extension of privilege leave for fifteen days.

BOMBAY GOVERNMENT.

The Governor-General is pleased to notify the appointments of the following officers on the staff of:—

Punjab Force.—Principal Med. Offr.—Surgn.-Col. R. Harvey M.D., D. S. O., I. M. S.; Personal Asst. to P. M. O.—Surgn., Capt. J. Thomson, A. M. S.

Bengal Force.—Principal Med. Offr.—Surgn. Maj.-Genl. T. Walsh, A. M. S.

Personal Asst. to P. M. O.—Surgn.-Capt. G. B. French, I. M. S., 8th Beng. Infy.

Madras Force.—Principal Med. Offr.—Surgn.-Col. C. E. McVittie, I. M. S.

Bombay Force.—Principal Med. Offr., Surgn. Maj.-Genl. J. Warren, A. M. S.

Surgn.-Capt. C. J. Sarkies, M.B., M.C.H., has been apptd. to med. charge of the Baroda Ready, in addition to his duties as Med. Offr., 8th Regt., Bombay Infy.

Asst. Surgn. D. E. Kothawalla, L.M. & S., is apptd. to act as Demonstrator of Anatomy in the Grant Med. Coll., from 4th March, during absence of Asst. Surgn. Anna Moteswar Kunte.

Asst. Surgn. Jivatram Alimchand Lalvani, L.M. & S., is apptd. a Teacher in the Medical School, Hyderabad (Sind) from 10th March.

Asst. Surgn. V. B. Karandikar and Surgn.-Capt. S. E. Prall respectively delivered over and received charge of Karwar Prison on 20th March.

Surgn.-Maj. J. P. Greany, M.D., I. M. S., have been permitted by the Secretary of State for India to return to duty.

The following transfers are sanctioned of Hosp. Assts.—Poonjabhai Thakral, from Civil Hosp., Kalra to genl. duty, Kalra, from 14th Feb'y.

Yeshwant Shridhar, from Dharangaon Dispy. to Civil Hosp., Dhulia, from 11th Feb'y.

Dattatraya Ramchander, from Civil Hosp., Dhulia, to genl. duty, Dhulia, from 11th Feb'y.

Mahomed Rahimankhan, from genl. duty, Bombay, to Barbers Dispy., from 30th Jan'y., vice Hosp. Asst. Syed Abdul Rahiman, granted leave.

Bhowanilal Harishanker, from genl. duty, Surat, to Civil Hosp., Surat, from 11th Feb'y., vice Hosp. Asst. Manekrai Pranshanker, granted leave.

Yeshwant Vitthal, from Gokak Dispy. to genl. duty, Belgaum, from 8th March.

Manekrai Manoria, from leave to Ranpur Dispy., from 15th Feb'y., vice Hosp. Asst. Shivaram Narayan, granted leave.

Kasturath Hari, from Civil Hosp., Thana, to genl. duty, Thana, from 10th Jan'y., and then to genl. duty, Bombay, from 22nd Feb'y.

Bapu Jaisow, from Civil Hosp., Gadhra, to Poonjab Dispy., from 22nd Feb'y., vice Hosp. Asst. David Aaron, transferred.

David Aaron, from Poonjab Dispy. to Ahmed Dispy., from 4th March, vice Hosp. Asst. Chintaman Fader, transferred.

Shankarji Hattibhai, from genl. duty, Bombay, to genl. duty, Surat, from 27th Feb'y.

Chatturaj Narayan, from genl. duty, Bombay, to genl. duty, Bombay, from 25th Feby.

Chatturaj Narayan, from genl. duty, Bombay, to genl. duty, Bombay, from 25th Feby.

Chatturaj Narayan, from leave to genl. duty, Poona, from 7th Feby., and then to genl. duty, Bombay, from 18th Feby., and then to Prison Hosp., Dharwar, from 28th Feby., vice Hosp. Asst. Chhannaji Ramchander.

Daji Thondar Joshi, from genl. duty, Bombay, to Kunita Dispy., temply., from 21st Feby., vice Asst. Surgn. Bhan Govind, transferred.

Dattatraya Ramchander, from genl. duty, Dhulia, to Brandol Dispy., temply., from 19th Feby., vice Hosp. Asst. Chatturaj Narayan, granted leave.

Purnotam Haribhai, from genl. duty, Ahmedabad, to Khergaum Dispy., from 24th Feby., vice Hosp. Asst. Ranchodlal Mancharam, transferred.

Ranchodlal Mancharam, from Khergaum Dispy., to genl. duty, Surat, from 3rd March.

Hari Shrinivas Bichu, from genl. duty, Sholapur, to Bagevadi Dispy., from 28th Feby., vice Hosp. Asst. Amrut Govind, granted leave.

David Joseph, from genl. duty, Thana, to Chinchni Dispy., temply., from 28th Feby., vice Hosp. Asst. Moreswar Trimbak Sathe, granted leave.

Shantaram Ramrao, from Civil Hosp., Karwar, to Nirsai Dispy., temply., from 24th Feby., vice Asst. Surgn. Venkatesh Balwant Karamdikar, transferred.

Govind Balkrishna, from genl. duty, Ratnagiri, to cholera duty, Nivsar, Ratnagiri Collectorate, from 10th Feby., and then to genl. duty, Ratnagiri, from 20th Feby.

Chuhmal Santdass, from Civil Hosp., Hyderabad, to Civil Prison Hosp., Hyderabad, from 12th Jan'y.

Teekchand Lekhray, from N.-W. Ry. Dispy., Ruk, to N.-W. Ry. Workshop Dispy., Sukkur, from 16th Jan'y.

Asst. Surgn. Pirozsha Pallonji Mullan, priv. leave for one month, from 14th Feby.

Hosp. Asst. Narayenrao Jadav, Civil Hosp., Surat, priv. leave for two months, from 11th Feby.

Hosp. Asst. Shaik Ahmed Patel, Civil Hosp., Bijapur, priv. leave for two months from 21st Feby.

Hosp. Asst. Udhev Deoji Power, genl. duty, Ratnagiri, priv. leave for two months from 2nd Feby.

Hosp. Asst. Syed Abdul Rahimam, Barbera Dispy., priv. leave for one month from 30th Jan'y.

Hosp. Asst. Shivaram Narayan, Ranpur Dispy., priv. leave for one month from 15th Feby.

Hosp. Asst. Chatturaj Narayan, Brandol Dispy., priv. leave for one month and twenty-two days from 19th Feby.

Hosp. Asst. Amrut Govind, Bagevadi Dispy., priv. leave for one month from 28th Feby.

Hosp. Asst. Moreswar Trimbak Sathe, Chinchni Dispy., priv. leave for two months from 28th Feby.

Hosp. Asst. Permand Vishindas, in sub-med. charge, Central Prison Hosp., Hyderabad, priv. leave for three months from 2nd Jan'y.

Hosp. Asst. Balkrishna Mahadev, N.-W. Ry. Locomotive Dispy., Sukkur, priv. leave for one month from 16th Jan'y.

The priv. leave granted to 2nd Hosp. Asst. John Joel is extended for one month.

Seenya Kessiram to be 1st grade Hosp. Asst. from 11th March.

Hosp. Asst. Wamon Kashinath is apptd. 2nd class Hosp. Asst. for Civil Hosp., Bijapur, from 6th Feby., vice Hosp. Asst. Manthum Subayram, transferred.

Hosp. Asst. Maneckrai Pranshanker is apptd. Senr. Hosp. Asst. for Civil Hosp., Surat, from 11th Feby., during absence of Hosp. Asst. Narayenrao Jadav.

Hosp. Asst. Mahadev Govind, genl. duty, Bijapur, is apptd. Senr. Hosp. Asst. for Civil Hosp., Bijapur, from 21st Feby., during absence of Hosp. Asst. Shaik Ahmed Patel, on leave.

Hosp. Asst. Jettaram Pandya, placed at disposal of Bhavnagar-Gondal-Jaagard-Portbandar Ry. from 21st to 31st Aug. 1894.

Hosp. Asst. Chinnai Pranjwandas placed on genl. duty, Brough, from 15th Feby.

Hosp. Asst. Shankaraji Narsai received charge of Civil Hosp., Kaira, on 14th Feby.

Hosp. Asst. Poojai Jadav, placed on genl. duty, Poona, from 7th Feby.

Hosp. Asst. V. Appadornai Nether is placed on genl. duty, Sholapur, from 1st Feby.

Hosp. Asst. Mahadev Chodabhai received charge of Dispy. Dhargadhi, on 6th Feby.

Hosp. Asst. Keshav Govind received charge of Civil Dispy. on 28th Feby.

Hosp. Asst. Samaldas Narsi, placed on genl. duty, Ahmedabad, from 27th Feby.

CENTRAL PROVINCES GOVERNMENT.

Civil Hosp. Asst. Madho Sadan Dam, attached to Main Dispy. Raipur, held temp. med. charge of Police Hosp., Raipur, in addition to his own duties from 26th Feby. to 10th March.

Surgn. Col. J. H. Newman, M.D. apptd. Administrative Med. Offr. and San'y. Commr. of the Central Provinces.

Surgn. Capt. H. E. Banatvala assumed charge of Nimer on 15th March.

Surgn. Capt. H. E. Banatvala, Civil Surgn. Nimer, assumed executive and med. charge of Khandwa Jail on 15th March.

N.-W. P. AND OUDH GOVERNMENT.

Amjad Ali, a passed student of the Lahore Med. Coll., is apptd. to Civil Med. Dept. of these Provinces at 3rd grade Asst. Surgn. from 21st March, and is placed on reserve duty at Lucknow.

Surgn.-Maj. C. P. Lakis, Civil Surgn., held med. charge of the Camp of H. H. the Lieut.-Govr., N.-W. P. and Chief Commr. Oudh, from 4th to 16th April.

BURMA GOVERNMENT.

Surgn.-Maj. G. T. Thomas, I. M. S., Civil Surgn. and Suplt. of Jail, Moulmein, furlough out of India (p.a.), for nine months.

Surgn.-Lieut. A. E. Berry, I. M. S., made over, and Surgn.-Lieut. T. H. Foulkes, I. M. S., assumed as a collateral charge the duties of Civil Med. Offr., Falam, on 6th March.

Surgn.-Maj. F. P. Nichols, A. M. S., made over, and Surgn.-Capt. K. Prasad assumed, charge of Civil Surgn., Saweto Dist., on 18th March.

Hosp. Asst. Nissari Huq relinquished charge of Outpost Hosp., N'Krong, Myitkyina Dist., on 2nd March, and assumed charge of Civil Dispy., Myitkyina, on 6th March.

Hosp. Asst. Sandhe Khan relinquished charge of escort duty at Bhamo, on 15th March, and assumed charge of Police Hosp., Bhamo.

Hosp. Asst. Maung Po Hla assumed, as an additional duty, charge of Jail Hosp., Monywa, Lower Chindwin Div., on 10th Dec. 1894, vice Hosp. Asst. Hem Chandra Koyal.

Hosp. Asst. Shaik Abdool Aziz relinquished charge of Tiddim, Chin Hills Dist., of Mily. Police party, on 27th Nov. 1894, and assumed charge of Police Hosp., Tiddim, Chin Hills Dist.

Hosp. Asst. Shaik Abdool Aziz assumed as an additional duty charge of Civil Dispy., Tiddim, Chin Hills Dist., on 18th Dec. 1894.

Hosp. Asst. Shaik Abdool Aziz relinquished charge of Police Hosp., Tiddim, Chin Hills, on 26th Dec. 1894, and assumed charge of Outpost Hosp., Fort White, Chin Hills Dist., on 28th Dec. 1894.

Hosp. Asst. Hem Chandra Koyal relinquished charge of Tiddim, Chin Hills Dist., of Mily. Police party, on 26th Dec. 1894, and assumed charge of Police Hosp., Tiddim, Chin Hills Dist.

Hosp. Asst. Hem Chander Koyal assumed, as an additional duty, charge of Civil Dispy., Tiddim, Chin Hills Dist., on 26th Dec. 1894, vice Hosp. Asst. Shaik Abdool Aziz.

Surgn.-Maj. G. T. Thomas made over, and Surgn.-Capt. A. O. Evans assumed, charge of Moulmein Jail on 18th March.

Surgn.-Maj. F. P. Nichols made over, and Surgn.-Capt. K. Prasad assumed, charge of Saweto Jail on 18th March.

Hosp. Asst. Gobardhan qualified himself for promotion to the next higher grade on 1st Oct. 1894, and is entitled to the pay of the same from 1st Jan'y.

Hosp. Asst. Goolam Mustafa relinquished charge of escort accompanying the Supdt., Northern Shan States at Lashio, Northern Shan States.

Hosp. Asst. Goolam Mustafa relinquished charge of Police Hosp., Lashio, Northern Shan States, on 24th Feby., and assumed charge of escort accompanying the Supdt., Northern Shan States.

Hosp. Asst. C. A. Chinnassawmy Phay, six months' leave on med. certificate on 1st March.

Hosp. Asst. Abdul Rahman relinquished charge of Police Hosp., Khatat, Upper Chindwin Dist., on 4th Feby., and assumed charge of Outpost Hosp., Khatat, Upper Chindwin Dist., on 18th Feby.

G. O. C. C.

Surg. Maj. Genl. A. F. Bradshaw, M.B., A. M. S., is permitted to proceed to England on retirement from the service. The Commandant-in-Chief in India is planned to sanction an exchange of places on the Indian roster of service between Surg. Maj. J. F. Williamson, M.B., and Surg. Maj. G. F. A. Surry.

The undersigned has granted leave in India:—Surg. Capt. G. B. Irvine, 14th Beng. Infy., leaves in India from 15th April to 15th Oct. on (p.a.)

Asst. Surg. William Warneft Turner, I. S. M. D., is granted two months' leave in India on (p.a.)

Surg. Lieut. W. E. Scott-Moncrieff, 9th Beng. Lancers, to charge of regt., *exco* Surg. Lieut. Col. E. Palmer.

Surg. Capt. H. B. Winter, A. M. S., leave for six months, on (p.a.)

Surg. Capt. J. S. S. Lumsden, 40th Beng. Infy., to charge of regt., *exco* Surg. Capt. W. Vost.

ASSAM GOVERNMENT.

Privilege leave for three months is granted to Hoap Asst. Fayaz Muhammad Hussain, in met. charge of Kokilamukh Coolie Depot, Sibsagar Dist., from 16th March.

Hoap Asst. Rajani Kanta Karmakar, unpermy., Sibsagar Dist., is appld. to the Kokilamukh Coolie Depot from 16th March.

DOMESTIC OCCURRENCES.

MARRIAGES.

MACROBIN—HOLLAND.—On the 3rd April, at St. Stephen's Church, Bareilly, by the Rev. R. A. Cumine, Brig-Surg. Lieut. Col. A. A. Macrobin, M.B., Medical Staff, to Jane Catherine, only daughter of the late Philip Holland, Esq., of Swanage Park, Cueshire.

SETON—ARMSTRONG.—On the 16th March, at St. Simon's, Southsea, Surg. Capt. Bruce Gordon Seton, I. M. S., eldest son of the late Lieut. Col. A. R. Seton, R. E., to Elma, daughter of Lieut. Col. F. H. Armstrong, Southsea.

DEATH.

MOSES.—On the 5th April, at 6, Wood Street, of cholera, Owen, the eldest son of Dr. and Mrs. S. O. Moses, aged 2 years and six months.

NOTICES TO CORRESPONDENTS.

A Native Doctor wanted.—DR. McCABE DALLAS of Kumbhir, Cachar, writes as follows:—"Could you advise a good doctor babu—a man with experience, having a knowledge of English and able to read and understand an English prescription, to come here? A man with a certificate from a college, Hindu, the higher the caste the better. Pay Rs. 40, after six months' approved service Rs. 50. The appointment is permanent, except that misbehaviour would cause peremptory dismissal and two months' notice on either side to terminate the contract, but a good, reliable man might look on the berth as one he could hold for years.

The garden for which the man is intended is alongside of my house; it is compact, with a small hospital attached and bazar alongside."

Candidates will be good enough to apply direct to Dr. DALLAS.

J. J. A. (Panchgani).—See *Indian Medical Record*, 16th November 1894, page 307.

J. H. (Lucknow).—The above note answers your query. Certificates will issue shortly.

N. C. (Bakkar).—A practising physician's fee, when called out of town, is fairly reckoned by a charge of Rs. 10 an hour for the whole time that he is away from his work.

H. P. B. (Panchabdra).—The Sanskrit translations of medical works dealing with special subjects tersely and clearly written would, we think, be of great interest. We have your meteorology papers under review, but at present articles of great medical interest command our space. The report of the last snake-bite case will soon be published.

M. A. A. (Hyderabad).—You have been of great service to the Association, and your interest in securing members is much appreciated.

T. H. (Lucknow).—We shall give your matter early attention.

P. V. R. (Bengal).—Candidates for the M.B. degree of the University of Bombay must possess complete British qualifications in medicine, surgery and midwifery, and the examination must be passed in Bombay. For further information refer to the *Medical Register and Directory of the Indian Empire* to be had of this office.

H. K. S. (Raiganj).—Your letter appears in this issue.

J. E. W. (Kimari).—The form of application for membership is given in the Association's advertisement. Send in your name and those of others.

V. C. H. M. (Manamalkudi).—Apply to the Manager, *Medical Times and Hospital Gazette*, 11, Adam Street, Strand, London.

D. D. (Rajkote).—Your paper will appear in an early issue.

E. A. (Myitkyina).—The memorial of the Indian Medical Association is, we learn, receiving kindly attention at Simla.

W. D. W. (Solangore).—We shall be glad to help forward the movement of the Assistant Surgeon of your settlements. Please give us full particulars and refer to back numbers of this Journal for information and guidance.

C. A. R. H. (Dagehui).—Refer to Vol. VII, page 169, also to our Current Medical Literature section, July 1894.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medical-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganja-Tibet—Gaillard's Medical Journal—Calcutta Journal of Medicine—Sculpel—The Practitioner—Medical Missions.

Gazettes of the Governments of India.—N. W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineer—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Ananta Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine.

Book.—*The Elements of Pathological Histology*. By Dr. Anton Weichselbaum. (Publishers: Longmans, Green & Co., London, 1895). Price 21. 1s. net.

Literary Contributions and Letters from: J. Nield Cook, M.B., Madras; Surg. Capt. J. F. Evans, M.B., and Asst. Surg. Chuni Lal Bhow, M.B., F.R.C.S., Calcutta; Alf. McCabe Dallas, L.M. Dub., L.N.C.P. &c., Kumbhir; John Morton, M.D., L.N.C.P. & s., (Edin.), Mussorie; Hara Kali Sen, M.B., Dinajpur; R. K. Tassan, M.B., C.M. (Edin.), Bhurtpore; L. N. Choudhury, L.M., Beral; Bhagat Ram, M. A., Umballa; Rati Kanta Mursadar, Jagad P. O.; Roger G. S. Chow, M.D., &c., Calcutta; and others.

Original Articles.

THE TREATMENT OF THE BITES OF RABID ANIMALS BY PERMANGANATE OF POTASH.

By D. MORISON, M.D., C.M.
Rampur Boalia.

WHAT treatment should be adopted for the bites of rabid animals, so as to give the patient the best chance of escaping hydrophobia, is a question of absorbing interest and importance at the present time. It is at all times and in every country important to the surgeon, but especially so in India, where deaths from hydrophobia, if they were correctly reported and registered, would show a high and widespread mortality. In the following record of cases treated by permanganate of potash, I trust there is some approach to answering that question:—

During the last seventeen years I have had so many cases of bites of rabid animals—jackals and dogs—and such uniform success in their treatment, that I deem it worthy to lay the facts before the medical profession.

CASE I. *Dog-bite*.—As far back as 1879, I had my first case of rabid dog-bite. A little girl, aged ten years, a Mohammedan, was brought to me twenty-four hours after being bitten, from a neighbouring village suffering from extensive laceration of the scalp. I learned from her mother, who accompanied her, that her daughter was playing near her, when a strange dog, which she believed was mad, attacked the child, knocked her down, bit her forehead, tearing her scalp. The dog was driven off, and was seen immediately after attacking a dog belonging to the village. I had, previous to this in the end of 1878, begun to use a weak *permanganate of potash* solution as a dressing for simple ulcers and sores—a cheap and efficient dressing—to replace carbolic oil and carbolic solution, which I found inefficient for patients who had to walk miles in a scorching sun or work all day in the fields. The *permanganate solution* could be given each patient in such quantity that he could, without opening his bandages, keep the dressing *continuously moist*, making it impervious to air, and keeping it practically antiseptic during day and night. It occurred to me in this my first case that, as the *permanganate of potash* was such a powerful oxidising agent, parting readily with some of its oxygen to organic substances, it would at least be as rational a mode of treatment for bites of rabid animals as any other treatment then known to me. I therefore washed the lacerated scalp with a strong solution of *permanganate of potash*—(I did not then note the exact strength; but it would have been probably 8 to 10 grains to the ounce of water. I now use 8 grains to the ounce on the first application and keep the wound dressed with 3 grains to the ounce),—bandaged the head, giving the mother a solution of 8 grains to the ounce with instructions to keep the dressing *continuously moist*, day and night, as far as possible. The wounds healed kindly and the child was well in three weeks. Before the child's wounds had been quite healed, the village dog which had been

bitten, became rabid, and the mother of the child came to me in great alarm, as the villagers assured her that her child would also go mad. I tried to infuse hope into her, although I was not over-hopeful myself. The child was alive 5 years after.

CASE II. *Dog-bite*.—I determined to follow up this line of treatment in the next case that came to me. In the beginning of 1880 a Mohammedan lad, aged 17 years, was brought to me by his father, 24 hours after he had been bitten. The lad was saying his prayers at midday on the banks of a tank near his father's house, when a rabid dog attacked him from behind, biting him severely on the leg. He at once tried to beat off the animal with his hands and feet, but to no purpose, until he seized it by the throat with both hands and strangled it. The lad was so severely bitten, and in so many places, that it required time and great care to open out every wound and scratch, and apply the *permanganate solution*. He came daily to be dressed and made a good recovery, notwithstanding the evil prognostications of his friends. He was alive and in good health three years after.

CASES III and IV.—My next two cases were to me cases of great anxiety. I had a little pup, not a year old, which had been bitten by an undoubtedly rabid pariah dog. I shot the pariah dog, but kept the pup, to see if he would become rabid, and if so, how long after being bitten. I kept him tied up and fed him as usual, my servants being warned not to go too near him. On the 14th day after the pup was bitten, as two of my servants were passing by within range of him, he snapped at them, biting both in quick succession. It was only then my attention was drawn to him, and I found him salivating freely, snapping at the air, biting his hind legs and the rope with which he was tied. I had him shot at once. The first man bitten was my bearer or personal house-servant—a native Christian. He was bitten on the big toe, and the wound was a deep incised one, apparently made by the incisor teeth, which were very sharp in a pup so young. The second man bitten was my syce, or groom, a Hindoo; he was bitten on the right leg over the anterior lower third of the tibia. The wounds were attended to immediately, and carefully opened up, washed with *permanganate solution*, and dressed as the previous cases. The wounds healed quickly, and I had them both under observation for two and three years respectively in perfect health.

CASE V.—This case was a *chuprassie* or messenger, a Hindoo. He had gone out to a field in the early morning, according to native custom, and when in the act of defecation, was attacked by a mad jackal and bitten in the right leg over the tibia. He came to me about six hours after he was bitten, and was treated and dressed in a similar manner to the previous cases. He was under observation for eighteen months in perfect health.

CASE VI.—This case was a jackal-bite. The patient was a Hindoo, an old man 60 years of age, watchman at a Government godown or store-shed. He was attacked on the main road, in the early morning, and bitten on the leg. I saw him a few hours after he was bitten. He made a good recovery, and was well for one year, after which I lost sight of him.

CASE VII.—A Hindoo musician, in a village not far from my dispensary, came to me in a state of great

*A paper read before the Indian Medical Congress and sent to the Record for publication.

hysterical, with his leg covered with blood. He had been sitting in the sun's rays, warming himself in the morning, when a mad jackal rushed at him and bit him in the leg. He was very nervous and apprehensive of hydrophobia. He was treated as the others, and was well two years after being bitten.

CASE VIII, IX, X, XI.—Here we have four cases which I may group together. In a village a few hundred yards from my house, a mad jackal attacked a goat tethered near one of the huts. The grandmother of the house came to rescue the goat, the jackal turned on her and bit her; the daughter-in-law came to her aid, and she also was bitten; a neighbor, a young man, came to drive the jackal away, and he too was bitten. The jackal then disappeared into the jungle behind the village. The son of the old woman, the first victim, came home from the field shortly after, and finding his mother and wife bitten, armed himself with a bamboo and went in search of the jackal. He had only gone a few yards from the village when he saw the jackal coming towards the village again. He tried to strike it, but missed his blow; the infuriated animal rushed upon him and before he had time to defend himself he was bitten on the leg. These four were patients of mine, and received the same treatment. All were in good health eighteen months after.

CASE XII.—A Mohammedan ryot, who lived 10 miles from my dispensary. I saw him two days after he had been bitten by a jackal, supposed to be mad. His wounds chiefly on the legs were crusted over. I opened each one and applied the *permanganate solution* as in previous cases. He did well, and I never heard of his illness or death, although I frequently enquired about him from villagers who came from his village.

CASE XIII.—This man was a boatman on the Ganges. He was attacked by a rabid jackal on the highway; was treated as the previous cases, and did well. He was under observation for three months, after which I lost sight of him.

CASE XIV.—A Mohammedan ryot, bitten by a rabid dog. I saw him 24 hours after he was bitten. I treated him as the others and had him under observation for about a year.

CASE XV.—This was a case seen on tour in the interior of the district, at a distant village. He was bitten by a rabid jackal, and was similarly treated. He was well six months after, by the reports of friends who knew him.

CASES XVI, XVII.—These two cases were two brothers, sons of a Hindoo carponter, who was in my employ at the time the incident occurred.

The first (Case XVI) a boy eight or nine years of age, was attacked by a rabid dog which entered the courtyard of the house. The elder brother, a lad of 18 or 20 years, seeing the animal attacking his brother endeavoured to drive it off. The dog seized him by the hand and would not let go its grip until assistance came, and the animal's mouth was forced open with a bamboo. Both were brought to me by their father on the following morning 18 or 20 hours after being bitten. Case XVI had an abrasion on the chest and leg quite superficial and easily washed and dressed. Case XVII, the elder lad, had a deep punctured wound on the ball of the thumb (palmar aspect), and a superficial incised wound on the dorsal

aspect. I proceeded to open up the wound, after applying the *permanganate solution*. When the father, seeing the pain his son was put to, intervened, and he withdrew his hand, and would not permit me to proceed. I then offered to give him chloroform, but he refused, and I was obliged to let him go with a superficial application of the solution, which I feared would be of no avail. I explained to the father the grave risk he was incurring; but they seemed to prefer trusting to fate than to undergo the operation. The elder lad (Case XVII) died of hydrophobia 21 days after the bite. The younger was alive and well four years after. I shall always regret that I had not first put him under chloroform, which he might have submitted to, before he felt the pain of the operation.

CASE XVIII.—This was a boy 9 or 10 years of age, a Mohammedan, bitten by a rabid dog in a village near my house. The villagers came running to tell me that a mad dog, which had bitten a boy, was approaching my house. I took my gun, followed the dog to make sure that he was rabid before I shot him. He laid down in the shade of a shrub behind my stables. He was panting, snapping the air, and saliva was dribbling from his mouth. I shot him. The villagers then told me he had bitten a village dog. I sent for the boy who had been bitten, treated him, and he was well four years after. I got possession of the bitten dog, tied him up and had him fed daily. On the eleventh day he became rabid, and died on the fourteenth day.

CASE XIX.—A boy, 7 or 8 years of age, a Mohammedan from a village not far from my house, was brought to me by his father, who said the boy and some other men—how many was not known—were bitten by a rabid jackal. I treated the boy as in previous cases. About 18 or 20 days after two men were brought to me suffering from hydrophobia. I could do little for them, they both died in three days. These two men and the boy were bitten by the same jackal. The boy was alive and well some years after.

CASE XX.—A Mohammedan Monvie was bitten by a rabid dog. He was treated as the other cases. He is still alive, six years after being bitten.

In addition to these twenty cases, I have had about 8 or 9 others, of which no definite record has been kept, as it was found impossible to verify the condition of the animal, or to keep them under observation a sufficiently long time to test the results of treatment.

Analyses of rabid bites.—If we tabulate these cases, we have two columns numbering respectively 9 dog-bites, and 11 jackal-bites.

| Dog-bites. | | | | Jackal-bites. | | | |
|--------------------|-----|---------------------|---|------------------------|----|--------------------------|--|
| Nos. | 1. | Certainly rabid. | 7 | Nos. | 5. | All presumably rabid. | |
| | 2. | | | Certainly | 6. | | |
| | 3. | | | rabid. | 7. | | |
| | 4. | | | | 8. | | |
| | 14. | Doubtful. | 2 | Doubtful. | 9. | | |
| | 16. | Certainly | | 10. | | | |
| | 17. | rabid. | | 11. | | | |
| | 18. | Certainly | | 12. | | | |
| | 19. | rabid. | | 13. | | | |
| | 20. | Doubtful. | | 14. | | | |
| Total 9 dog-bites. | | | | Total 14 jackal-bites. | | | |

Dr. J. M. B. BARNES, who suggested this treatment in 1884, two years after I had begun to use it, says: "It is not to rely on statistics in the treatment of the bites of rabid animals, as they are of 'a most erratic character.' This warning is needed, and that it may not be disregarded, I will endeavour in analysing these cases not to lay greater weight upon them than they legitimately warrant.

If we glance at these cases, we see that they consist of eleven jackal and nine dog-bites. I will consider the jackal-bites first. Every one knows how impossible it is to follow up a reported mad jackal after it has bitten, to ascertain whether it is really rabid or not. It is usually either killed on the spot or it escapes into the jungle, to be seen no more. Here then at the very outset we have an element of considerable uncertainty introduced into these eleven cases of jackal-bites. And yet the uncertain element is not so great as it may at first seem. Those who have lived for any considerable time in outstations in Bengal, know that the jackal is naturally an exceedingly timid animal, in presence of man or animals. I have seen a little English fox terrier chase a pack of jackals and scatter them like sheep. It is rarely, if ever, known to attack a man unless it is rabid. * SIR JOSEPH FAYRER, when writing of two men who were bitten by one jackal, says: "Only a mad jackal would do this, as it is a very timid animal, and never otherwise attacks men."† My experience corroborates the truth of that remark, and would add especially in daylight. All these eleven persons were bitten by jackals in daylight. How many of these jackals were rabid, and in how many instances the virus entered the wounds, are questions to which we can only give approximate answers when we come to deal with statistics of rabid bites.

The nine cases bitten by dogs clearly show that of them seven at least were bitten by rabid dogs. Thus—Cases I, II, III, IV, XVI, XVII, XVIII leave no doubt in our minds that the dogs which bit them were rabid.

We now come to consider the question of statistics, which, although confessedly unreliable and erratic, is the only course left open to us in cases of this kind.

It has been stated by one writer‡ on hydrophobia, that when no preventive measures are adopted, "at least half, perhaps two-thirds, escape." DR. RUFFER stated, before the Society of Arts, London§ that 80 per cent. of those bitten on the face by rabid animals died; and that 15 per cent. is the lowest mortality amongst those bitten on any other part of the body. In July 1885, five boys coming from school in London were bitten by a rabid dog, and all the five were cauterised by skilled surgeons. They all died from hydrophobia within four months. These are statistics based on cases occurring in Europe, where the action of the virus is neither so rapid, nor so certain as it is in India—chiefly on account of the climate, and the scanty clothing of the people. The statistics in India, which DR. VINCENT RICKARDS found so variable, contain the uncertain element of whether the animal was mad or not. It has never been shown

that in India, "one-half or two-thirds" of those bitten by rabid animals escape, when preventive measures are not used. Surgeon J. BALFOUR, for many years in the Bengal Medical Service, referring to a native who had been sent to him by his European master as one of 17 or 18 persons bitten by a rabid animal, says:—"The injuries were on the calf of one leg and dog, but did not bleed much. I put him under chloroform, carefully excised the bitten part, &c. The man was sent home with instructions as to future treatment. Of the 17 or 18 men who were bitten, all died within three months, and this man recovered."¶ I quote this to show the proportion of those who escape in India, when fairly bitten by rabid animals, and no preventive measures are adopted! I am, however, not prepared to accept this instance as a type of what usually occurs; but as regards Bengal, it is nearer the truth than "one-half or two-thirds" escaping. I have found that in most cases the percentage of deaths is very high, when no preventive measures are adopted, usually ranging from 80 to 90 per cent. of those who are really bitten by rabid animals. That the percentage is not higher, I attribute to the habit of the people, when bitten, going to the nearest tank to wash their wounds. I will not, however, in discussing the 20 cases before us, take advantage of the higher percentage mortality in India; but accept the lowest percentage in Europe quoted by DR. RUFFER, viz.—15 per cent. as applicable to the cases we are considering. Even if we allow that one-half of these 20 cases were bitten by non-rabid animals—a far too generous allowance—we have still 10 cases of undoubted rabid bites with only one death—due not to the failure of the treatment, but to the neglect of proper treatment—giving a mortality of 10 per cent. That means, that deaths from rabid bites on the naked limbs in India were 5 per cent. lower than bites on any part of the covered body, except the face, in Europe. This result, so far as I know, has not been equalled by any other kind of treatment, excepting, of course, PASTEUR'S inoculations. But, according to all fair rules of criticism, a case such as No. 17—the one who refused to allow me to open up his wounds—should be left out of the statistics altogether. If we do so, the results, whether we exclude one-half as doubtful or not, are unprecedented. A series of 10 or 19 cases, whichever number we may feel disposed to accept, without a single failure. I am quite well aware, that this series of apparently successful cases does not prove that permanganate of potash is an antidote to the virus of hydrophobia. In 1884, when I submitted my thesis on this subject to the University of Glasgow, embodying the first fifteen cases of this list, I pointed out that only by experimental investigations could the question whether it was an antidote or not to the virus of rabies, be finally settled. I am not aware that such investigations have been undertaken, and until they are undertaken, and an authoritative answer is given to the question, the above record of cases must remain as an incentive to others to adopt the same treatment, until a better is found.

There are two questions—speculative questions as yet, I admit—which force themselves upon my attention as

* Lancet, 11th June 1887.

† Lancet, 2-7-71, page 785.

‡ Gowers' Medical Dictionary of Medicine—Hydrophobia.

§ Lancet in Lancet, 10th October 1885, page 1272.

¶ J. C. Balfour, L.R.C.S., Lancet 2-7-71, p. 676.

I thought over the obscure problems of this dreadful disease.

1. What is the nature of this subtle virus?

2. How does the permanganate render the virus innocuous, if it proved to be an antidote to rabid virus?

The nature of this virus, which has hitherto eluded detection, defying the efforts of our most eminent chemical and bacteriological investigators, is at present wrapped in mere conjecture. It would be difficult in such a well-trodden path to strike out any new path, or theory even; but if old theories are confirmed, it were not amiss even to reaffirm them. Hitherto the microscopic investigations, although often hopeful, have not yet been able to discover any micro-organism invariably associated with the disease; nor any organism which on being cultivated in suitable media, can produce the virus of rabies. It seems to me highly probable, from noticing the characteristic behaviour of the virus, that it is a ptomaine produced by some lowly organism, with a life history not very dissimilar to that of the bacillus of anthrax. Although these two diseases—anthrax and rabies—are by no means similar, yet there are some features in which these two diseases resemble one another. This will be seen from the following five characteristics which apply to both:—

Anthrax.

1. A disease of herbivora communicable to men and animals.
2. Has a varying period of incubation from 4 to 9 days.
3. Communicated by inoculation.
4. Virus remains at seat of inoculation for some hours or days before affecting the system generally and causing death.
5. May be prevented by excision and destruction of point of inoculation.

Rabies.

1. A disease of carnivora communicable to men and animals.
2. Has a varying period of incubation from 8 to 90 days.
3. Communicated by inoculation.
4. Virus remains at seat of inoculation for hours or days before affecting the system generally and causing death.
5. May be prevented by excision and destruction of point of inoculation.

The resemblance would be still more striking if the virus of these two diseases could be rendered innocuous by bringing them into contact with a solution of the permanganate of potash, of a given strength. Not only so, but the attenuation of the virus could be controlled up to any point, with the certainty of a chemical equation, should this prove true.

We know how the virus of anthrax is attenuated to form a vaccine, which effectually protects animals from the disease; and how by exposure to dry air the virus of rabies has been attenuated presumably by the oxygen of the air. A similar attenuation has been obtained by heating the virus in vacuo; but the attenuation thus obtained is said not to be permanent. The attenuation produced by compressed oxygen remains permanent. PASTEUR has pointed out a most important distinction in the process of attenuation of the virus of rabies which takes place when it is brought into contact with dry air. It "is an effect of a diminution of the quantity of the virus of rabies contained in the spinal cord, and not an effect of a diminution of its virulence." This fact lends support to the

efficacy which I claim for the permanganate of potash as an oxidising agent brought into actual contact with the virus of rabies in wounds, caused by the bites of rabid animals. From these facts it seems highly probable that oxygen, whether in the form of dry air, compressed oxygen, or by chemical action as with the permanganate solution when brought into contact with the virus of rabies, destroys the virus and renders it innocuous. The treatment, therefore, which I have adopted and recommend to others, is in accordance with the most recent advance in bacteriological science, and promises to become an important and permanent ally to the treatment by inoculations with attenuated virus—a treatment which we can never hope to see made available to the ordinary Bengal ryot. The permanganate treatment on the contrary could be placed in the hands of the ordinary ryot or peasant with a few simple instructions; and, in slight superficial wounds—which are as dangerous as deep ones—he might effectually ward off hydrophobia in a great number of cases.

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PLASMODIUM MALARIE, ITS IMPORTANCE IN THE DIAGNOSIS OF TROPICAL DISEASES.

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We have used the microscope for diagnostic purposes in doubtful pyrexial states for the last five years, and although the results cannot always be relied upon, we conclude that whenever free crescents, spherules, red blood cells containing hyaline bodies increasing in size, flagellæ or flagellulæ are present, the patient is suffering from some form of malarial poisoning.

After the manner of GOLGI, an attempt was made to connect the development of the organism with the different stages of ague, but in this respect very little beyond what has already been ascertained by that distinguished investigator could be brought out.

Cases were examined just before, during and after the paroxysms. The following remarks represent what was found in several cases of quotidian ague, all of an acute type:—

During fever the spores, both free and within the red blood corpuscles, were always seen, and always associated with free amoeboid bodies. Spherical cells, especially the "simple" kind, were invariably present, but in some instances they had attained a later stage of their development—flagellate processes being seen projecting from the surface. The larger varieties of the free parasite were sometimes found. It was repeatedly noticed that at the end of three or four hours, the number of red blood cells infected by spores appeared to be considerably increased.

It is remarkable that no relation could be established between the different forms of the parasite and the varieties of fever. It is likewise striking that in three cases of slight fever, large numbers of the immature varieties of the parasite were found; in the first the temperature was 99.8° Fahr., and the patient had only suffered from two

in the other two the temperature was not beyond 101° , and usually not beyond 100.5° , and yet the parasites were always in abundance even during apyrexia.

About six weeks ago, we had the good fortune to meet with a case of chronic malarial poisoning in which tertian ague was still recurring. In this case every form of parasitic growth yet discovered was visible. It is in these cases of chronic malarial poisoning, especially when the ague continues, that the polymorphism of the plasmodium malarie is characteristically met with, and they are then as a rule, in considerable numbers.

We might here say that those not yet familiar with the subject should apply the microscope to the diagnosis of malarial diseases, but we would remind them that some inexperienced observers have undoubtedly taken certain natural constituents of the blood, and the products of blood-coagulation for the various forms of the parasite.

We can only mistake the parasite for one or other of many of the constituents of healthy or morbid blood, and what these constituents are, need not be here enumerated. Nor need we now state how the various forms of the parasite are to be differentiated, but we should always be cautious as regards "vacuoles" in red blood-cells and the "blood plates" of HAYEM.

It has been established, as a rule, with many exceptions, that the severity of the attack is in proportion to the number of the parasites in the blood. This may be made a matter of daily observation in areas of endemic malaria. There are, as stated, many exceptions, where patients, for instance, suffering from severe fever, possess few microbes and less frequently, where with many, the attacks are mild.

We need not go into detail regarding those assertions which were made a few years ago, according to which, in the most diverse infectious diseases and cachexie, "similar bodies" to LAVERAN'S parasite had been found. It is through such errors that the pathogenic and etiologic importance of LAVERAN'S malarial parasite was depreciated, but now most of the authors of such statements have admitted that they erroneously mistook other things for parasites which were not so, or *vice versa*.

Similarly, we might differentiate all normal constituents from parasitic structures, but this is not here necessary.

The following highly interesting table, modified from one of the most recent works on bacteriology, gives at a glance the chief general and special characteristics of the *plasmodium malarie*. There are several points in the table with which we do not quite agree, but in the main the table expresses the views of the best authorities on the subject.

Place found.—In blood corpuscles of those suffering from malarial poisoning.

Form and Arrangement.—Protoplasmic corpuscles of varied form (round, oval, crescentic bodies and flagello), with or without pigment, as the malarial process in which they occur is chronic or acute, due to changes occurring in the hæmoglobin. They present a cortical substance (ectoplasm), surrounding a less colored portion (endoplasm), which contains sometimes one or more dendri and senescent.

Motility.—Rapid amoeboid movements.

Growth.—A method by which these organisms may be cultivated outside the human body has not as yet been found. They probably need a vital nutritive medium.

Spore-formation.—It multiplies by cleavage of a whole or part of the protoplasmic substance. It becomes stationary, and the pigment of those so supplied, accumulates in the centre, while new elements bud from the periphery, which elements may from the first be pigmented, and may possess undulating flagella.

Active reaction.—The organisms may be observed when the blood is fresh. A strong lens is required. ~~Zinn~~ $\frac{1}{2}$ to $\frac{1}{4}$ immersion lens, apochromatic preferably, to detect them. Dry preparations may be beautifully stained by methylene blue. These high powers are not, however, absolutely indispensable. It is well known that their discoverer first saw this parasite with a dry objective lens, having a magnificate of $\frac{1}{4}$ only.

Pathogenesis.—The blood of a person suffering from malarial disease inoculated into the blood of a second individual, produces a typical malarial attack, and the organisms multiply and are capable of producing progressive infection. They disappear rapidly under the administration of quinine.

CELLI and GUARRETI believe that the organism belongs to the genus *sporozoa* (*protozoa*), family GREGARINIDÆ and order COCCIDIUM.

The diagnostic relations of the malarial parasite are highly important, but at the threshold of this subject we are beset with many difficulties arising out of the extremely complex nature of the phenomena associated with malarial poisoning, and from the absence of any definite evidence as to the relation of any particular form or forms of the organism with special clinical manifestations of malarial infection, the polymorphic nature of the parasite itself adding its share to the intricacy of the points under consideration.

It should be observed that there are still many competent observers who have not accepted the malarial plasmodium as the sole cause of paludal fever, and the whole subject is so new, that even those who accept Laveran's views find it impossible as yet fully to explain all the different clinical phenomena on this theory without some reserve. It appears certain to us however, that the germs exist in human blood during and between malarial paroxysms in numbers sufficient to exert powerful effects; for they can often be found in almost every drop of blood drawn. Moreover, the parasite is never discoverable in normal blood, or in diseases other than such as arise from malarial poisoning. In chronic forms of ague, in doubtful cases, the presence of the germ in the blood is of great value in diagnosis.

The hæmatozoa live at the expense of the normal elements of the blood. The invaded red blood corpuscles grow paler and paler in proportion to the development of the parasites, and even the colors of the colored cells at last disappear. It may be said that no anemia, except the anemia resulting from hæmorrhage, can be better explained than paludal anemia.

Moreover, anemia is the most constant symptom of paludism. All authors who have described paludal

phenomena, have insisted on the rapidity with which anaplasma takes place. A few grave attacks of ague are sufficient to make a patient unrecognisable, so marked does the anaplasma become. But curiously enough, certain patients become anæmic and fall into cachexia without having any fever. Anæmia constitutes with them the principal, and so to speak, solitary symptom of the infection.

The early diagnosis of remittent from enteric fever is sometimes an exceedingly difficult matter, not in their typical forms, but in those cases where there are such departures from the usual conditions as to lead us to doubt the nature of the case. We have seen physicians in India of wide experience and high repute, hesitate before giving a definite diagnosis earlier than the seventh or eighth day. On two occasions we have been able to confirm a provisional diagnosis of remittent fever by finding the malarial parasite in the blood in both cases, although they had both been pronounced to be enteric.

In the early stage of a pure remittent, the malarial parasite is to be found, in that of enteric it is not. All physicians will at once appreciate the value of this point.

In that complicated affection known as "typho-malarial fever," although the significance of the existence of the malarial parasite in the blood is less manifest, still it may be important to know as a guide to therapeutics, that malaria has its share in the symptoms. It would be very interesting to be able to confirm or refute the statement of LAFERAN to the effect that when in this disease, the enteric symptoms supervene, the malarial organisms disappear, and that they reappear, should the patient get ague subsequently. We have not met with a case of typho-malarial fever during the last two years to test this point.

In our brochure on the subject published three years ago, we showed that the occurrence of hæmoglobinuria in malarial infection was related to malarial parasites. We had not then, however, as we have now, proved that more or less hæmoglobin is to be found in the urine of all (or almost all) malarial fever patients, certainly in all cases of severe malarial fever and malarial cachexia.

Our attention was first rivetted to this subject in the year 1899, when we were treating three out of five members of a family that acquired malarial fever of a severe remittent form, all of whom had hæmoglobinuria. In none could a single red corpuscle be discovered in the urine. The patients were related as daughter, mother and grand-mother.

Allowing that toxins are produced in severe malarial infection, it is not improbable that these poisonous products of disintegration of the malarial parasite acting upon the cerebral grey cells, help in causing the symptoms just in the same way as other pyrogenetic bodies excite thermogenesis.

The varying effect or intensity of the *materies morbi* of malaria is well known. In such cases we have to fall back upon the theory of individual peculiarity, which might consist in a heightened irritability of the nervous system, or in some unusual chemical composition of the blood, which offers to the parasite (in the severe cases), a soil adapted to the production of particular poisonous bodies. Again, a difference in the toxicity of the parasites should be recollected. The co-existence of such factors

in malarial infection is shown from the diversity of the course of the disease under apparently similar circumstances. Thus, of several persons exposed to the action of malaria, some will get malarial fever, or other malarial diseases, whilst some will not. Of those afflicted with fever, some will get it acute, others late, or some severe, others mild; in some a cure will arise spontaneously in a few days, in others, after a week or so, whilst others go from bad to worse till they suffer from malarial cachexia.

The mass of evidence of a positive nature, collected by some of the best bacteriologists living, and in the shape of large numbers of cases, should make us especially careful of diagnosing malarial fever or malarial disease in general, in the absence of the organism from the blood. Again, we should bear in mind that against an exceedingly small number of negative results, there is a large number of positive, indeed, there are many reasons for believing that if the blood from internal organs was examined, and not that of the periphery, the number of negative cases would be much reduced.

Many now believe that a poison may be present in the spore-forming bodies, which give rise to the paroxysm by affecting certain nerve centres. The evidence of recent research in connection with toxins would tend to support this; and the fact that after a paroxysm of malarial fever, poisonous bodies are eliminated by different channels, gives very great probability to it. It has been proved that the urine passed immediately after an attack acts as a potent poison to rabbits, whilst that passed some time after, or before, or during a paroxysm, is much less so; the sweat of malarial patients kills the same animals, whereas normal sweat does not. It is suggested by MANNING that the poison produced by the parasite is like that created by the streptococci of acute suppurations; the clinical pictures of malaria and ordinary surgical sepsis also resemble one another, which appears to justify the idea that there is a relationship between the agent causing the illness in both diseases—the one is a fungus-sepsis, and the other a malarial or sporozoon-sepsis.

Changes of type of fever are now capable of easy explanation. Long before GOLGI's observations were made known to English readers, we had conducted and published the results of certain investigations which showed that the explanation lay in one or more generations of the parasite carrying on their existence in the blood simultaneously or from one or more generations ceasing to multiply, or undergoing disintegration.

Postponings and anticipations of paroxysms may also be readily explained by slower or more rapid development of the organisms; and exaggerations of these states or the falling out of one generation where there are two or more, may also explain changes of type, such as the alteration of a double quartan to a single quartan, or of a double quotidian to a single. Hence the curative effects of quinine, and also the prophylactic use of quinine in malarial places, and the necessity of beginning the use of the drug some days before exposure to the malarial influence.

My own observations show that in malarious localities the parasite is constant in those not taking quinine, constant even in health, but they are then present in large numbers. It is quite possible that there may be influences at work

to the human body, keeping it within bounds, and that malarial manifestations arise only when these influences are, for some season, out of order. Many years ago, we remember reading the view entertained by some authority (Dr. Bangs-Jones, we think) to the effect, that malarial fevers in tropical climates were due to the temporary absence from the blood of an organic body which he designated "animal quinine," and that the place of this agent could be adequately taken by "vegetable quinine," and lastly that this explained the virtue and curative influence of quinine in such diseases.

These parasitic micro-organisms of malarial infection have been found only in malarial diseases, and they have been constantly found. Malarial paroxysms have been produced in a healthy person by inoculation of blood containing such organisms. They disappear under the use of quinine.

Experiments shew that after febrile paroxysms the hæmatozoa disappear in part from the general circulation.

It may be premature to express a definite opinion in this connection, but there are a number of facts that go to shew inferentially, that it is the *fons et origo malorum*. Its existence in malarial conditions offers an easy explanation as to the cause of the cachexia and localised pigmentations produced. The destructive effect of some agent on the red blood-cells is as a matter of fact, one of actual observation.

The period taken for the development of new bodies corresponds to the intervals between the paroxysms (Golds). The constancy of the organism in ague and remittent fever, the power of quinine to cure the disease, the effects of irrigation with quinine solutions on the organism, and lastly, the fact that dogs into whom malarial blood was transfused, got the disease (the organism not being present in the dog's blood before the transfusion), shew the relation between the parasite and ague, and again between it and remittent fever.

DOCTORS AND THEIR PRESCRIPTIONS.

By WM. HUNTLY, M.A., M.D.,

Kotah.

A SHORT time ago, in the medicine bill of a London hospital, my eye caught the name "bismuth" and after it the sum £25, the amount paid for bismuth alone during the previous year. The sum to me was large, and all the more so, since bismuth is a drug which I but seldom prescribe in India.

The consumption of a large amount of bismuth in a London dispensary means, I should say, a large number of patients suffering from a form of indigestion which prevails more in large centres of population; but I think that it means more than this. There is a terribly long list of medicines, now-a-days, to choose from, and as I read over a new therapeutic index sent me, I could not but pity the position of the coming medical student.

The doctor in practice having no examination resting on his mind looks at such a list in a critical way, scans it, weighs the evidence for and against the drug, and mentally rejects or approves. Those approved are tested in practice and then independently of all other evidence, are finally added to or cut off from his prescriptions. One

doctor thus meets another, to find that their prescriptions for certain diseases are totally different, and yet, with justice, they both point to good results from their different lines of treatment.

Some doctors having perhaps retentive memories, hold to a great variety of prescriptions, while others earning an equal reputation, pin their faith to a few. There is the man who has forty drugs for one disease and the man who has one drug for forty diseases. The story goes of a famous old doctor who worked a large out-door practice with two huge bottles, one filled with a cough mixture, and the other filled with a rhubarb mixture, which he used for constipation and diarrhoea indiscriminately. Questioned how he could treat two opposites with the same rhubarb mixture, he philosophically replied that in the one case relief of the loaded bowel was obtained, and in the other the irritating material was carried off!

There is no doubt that the theory held by the physician with regard to a disease, influences his choice of drugs. Take, for example, malarial fever. One man holds that the root of the matter lies in the intestine, and if a flux free enough to carry off the factory whence issues the malarial germ, the poison present in the blood will die out of itself.

Another man places the importance on the liver and its derangements in connection with malaria; he holds that the battle is to be fought out with the liver as the fort from which the enemy carries on operations. In such a man's prescriptions calomel occupies a prominent place. Still another lays stress on the nervous factor and dispenses accordingly.

Yet, again, in malarial fever, the questions of the amount, frequency of dose, and time of administration of the quinine compounds are not settled to the satisfaction of all. Even quinine itself has its few doubters, seeing that occasionally in spite of its administration the fever is not stopped.

A year or two ago, I read of a case of malarial fever (tertiary I think) which resisted all remedies. At last some old nurse recommended that a blister be applied along the spine; the cure was immediate and permanent after the first blister.

Such divergencies in principle and practice are apt to lead to an attitude of scepticism towards medicine in general. I remember an old retired surgeon-major telling me that the only thing he was sure of in medicine was sulphur—for itch!

A correspondent of an American newspaper went the round of a number of doctors and described an imaginary ailment, receiving from each a prescription. These he published, poking fun at the medical profession in general. But scepticism, either in religion or medicine, as a rule, is knocked on the head when trouble comes!

From the many diversities in practice, the conclusion forces itself to the front, that a doctor employs that drug for which he has a predilection, in the manner most beneficial to his patients. His attention has been attracted to a certain drug, it may be by the enthusiasm of a teacher, or by a number of successes brought about by its exhibition. He proceeds to master the various lines in which he can employ it; he carefully studies its compatibilities,

and non-compatibility, its adjuncts, &c., and unconsciously, it may be, discriminates between the types of patients who are or are not susceptible to it. He knows what it can and what it cannot do. He then perhaps writes in praise of it, but in writing, fails to analyse or detail all the thousand-and-one little helps which made the drug in his hands a success. The next man who takes it up may be greatly disappointed with it in the first few cases, and discards it altogether. It thus happens, that many prescriptions valuable in the hands of one, are valueless in the hands of another doctor.

Thomas of Liverpool invented a splint for hip-joint disease; in his own hands, it was a wonderful success. He brought it before the profession, and it was tried in several institutions, but without exciting much enthusiasm in its favor.

Thomas sent for some of these splints made elsewhere, and found that while *very like his own*, they differed so much in principle, as to be thrown aside by him as useless caricatures. Some of these caricatures he pictured in his book; the secret of his own success lay in *personal* supervision of their manufacture in a room in his own house.

It is this *personal* factor of the enthusiasm and individuality of the doctor which contributes to the success of the special prescription. After all, it may be not so much the prescription, but the regimen, dieting, &c., which go along with it which should obtain the credit. But give the same doctor an unfamiliar and untried drug, and the chances are that there will not be the same success. The prescription which he knows intimately, calls out all his other resources and he attacks the case hopefully.

I think it is BRALE who notes a case of a fortune being built up in London by a doctor whose chief prescription had for its main drug, acid-nitro-mur-dil.

The main danger to young practitioners is an exaggerated faith in this or that drug or prescription.

I have come across many who rattle off a patient's complaint in this fashion:—Diagnosis,—neuralgia. Treatment—Calabar bean extract; and some well-known authority is quoted. It is more showy and impressive at first to the patient, but the result is frequently bad, both for patient and doctor, and a good drug gets a bad name undeservedly.

In this plan of prescribing, one great factor is omitted, that is to say, the man himself. If the doctor remember that the patient is a man with a something individual in him in addition to the disease, and if he can get a fair idea of this something, be it habit, temperament, idiosyncrasy or peculiarity, he will be well on his way to writing a sensible and effective prescription and doing his patient good.

To the doctor himself acting on such principles, there would be more confidence in what he prescribed and a greatly diminished itch for new remedies.

The water of the tanks in Secbore, Howrah, and the adjacent villages having been found poisonous through an accumulation of filth and dirt, the inhabitants have been prohibited from using it.

A MIRROR OF PRACTICE.

BRIEF NOTES OF TWO CASES OF SUN-STROKE WITH REMARKS.

By ASST. SURON. PURNA CHANDRA DASS GUPTA,
Kishoreganje.

SUNSTROKE, *insolatio*, *coup de soleil* and heat apoplexy, are synonymous terms, implying the various conditions of one and the same disease. This disease, though common in tropical climates, is very rarely met with in civil practice in India. During a period of about 22 years' practice, I have had the opportunity of seeing and treating only two cases of this disease, (in Lower Bengal), brief notes of which I herewith append:—

CASE I.—C. N. ROY, a Hindu male, of Brahmin caste, aged about 40 years, a priest by profession, of temperate habits, was suddenly taken ill with high fever, temperature 106°F, pulse 100 (full and bounding but soft), respiration quick, shallow, 30; conjunctive blood-shot, pupils contracted. Is partially unconscious and incoherent; no abnormal sounds in the chest; bowels rather costive since last two or three days; general health not good; spleen enlarged, almost reaching to the umbilicus from repeated attacks of malarious fever in his younger days. At some religious festival, he partook rather freely of some melons and other indigestible food, and then walked up to his house under the burning sun of May, a distance of about four miles, when he fell down suddenly immediately after his return home. The weather was moist and sultry. I was sent for at once, and found the patient suffering from the symptoms detailed above. An emetic with a cathartic enema was administered, while application of cold water to the shaven scalp and wet-sheet packing were resorted to, but all proved unavailing. The patient gradually became comatose, which condition deepened and stertorous breathing supervening, the patient expired with two or three attacks of general convulsions within six hours of the commencement of the attack.

CASE II.—BABU S. N. CHATTERJI, a Hindoo male of Brahmin caste, aged about 45 years, a Deputy Magistrate in Government service, very corpulent with short neck, &c., and to all appearance, a fit subject for apoplectic attacks with suspicious scars on both legs, addicted to alcoholic drinks (though not to excess), was suddenly taken ill with high fever on the 28th of April 1894. He had taken a heavy meal of sweatsmeats, &c., on the night of the 25th, and complained of indigestion and weakness on the two following days. I was sent for at 6 A.M. on the 28th and found the patient suffering from the following symptoms:—

Patient very restless, and rolling about in bed; temperature 104°F; conjunctive highly injected, pupils normal but inactive. Breathing hurried and shallow, about 50; perfectly conscious, answers questions rationally, but memory is defective; pulse full, bounding, rather hard, about 100; slight dulness on percussion all over the chest on both sides, respiratory murmur harsh and blowing in character. There is no headache or delirium. A full dose of antifebrin was given at once, with application of cold water to the shaven scalp and constant fanning, while dry cupping over the chest and nape of the neck, and other measures to reduce the temperature and congestion of lungs and brain proved

Intermittent: Hypodermic injection of quinine and wet sheet packing were being prepared, when suddenly the patient, in spite of my urgent orders to think of the recumbent posture, getting to go to stool, and fell down insensible in the verandah. Consciousness was, however, partially restored by sprinkling cold water on the head and face, but the breathing became more and more hurried and shallow, and the patient expired at 10 A.M. (that is, about 7 hours after the commencement of the attack) asphyxiated; the pulse remaining full and strong to the last.

Remarks.—From this brief sketch of the mode of attack, symptoms and termination of these two cases, it appears that the first one was a typical case of sunstroke (*coup de soleil* or heat apoplexy) and that the second a typical case of that variety of the disease called *heat asphyxia*. In the first instance, the cause of attack was no doubt direct exposure to the sun's rays. There was in both, evidently a strong predisposition to the attack from a deteriorated condition of the blood. In the first case from malaria, and in the second from constitutional syphilis and intemperate habits, while a heavy meal was the exciting cause in each case. It is said that soldiers with tight clothing and heavy accoutrements directly exposed to the sun's rays while marching are most frequently attacked with sunstroke, but from these two cases it is manifest that direct exposure to the sun's rays is not the only factor in its causation. Heat apoplexy may be caused by sultry and oppressive weather, without direct exposure to the sun. A deteriorated condition of the blood, arising from whatever cause, is essentially the most potent of predisposing etiological factors. Malaria, syphilis, alcoholism and kidney disease are by far the most frequent causes of such blood deterioration, and it is for this reason that European soldiers are more frequently attacked than native soldiers; for this reason also that the cultivators, who work in the fields under the midday sun, are so easily attacked with this disease. Over-crowding, bad ventilation and deficiency of drinking-water are also mentioned as predisposing causes.

In most works on medicine, three varieties of the disease, namely, the cardiac, the cerebro-spinal and the mixed form are mentioned. The first variety is said to end in speedy death by syncope, the second by coma and convulsions, and the third by a combination of both. In my first case is seen the second variety of the disease, but my second is quite a distinct form, which some authors describe as "heat asphyxia," and which should be considered as fourth variety of the disease. That the over-heated blood acted as a depressant to the respiratory centre in the medulla was very clearly seen in this case. I have never seen a case of the pure cardiac variety of sunstroke in which death takes place speedily by syncope. In such cases, whether the over-heated blood kills by its depressant action on the circulatory centres in the medulla, or by acting directly on the cardiac ganglia, is a question which requires to be decided; as for myself, I think the latter to be more probable; for in my second case, where death was caused by the depressant action of heat on the respiratory centres, no effect was apparently produced on the heart, except in so far as quickening its action, as is commonly seen in all cases of hyperpyrexia, yet both the

respiratory and circulatory centres of the medulla are so close to each other.

It is very difficult to understand how the same amount of heat in the blood, which could paralyse the respiratory centres, leaves intact the circulatory ones, and even stimulates them.

Physiology teaches us that over-stimulation of a nervous centre causes exhaustion in the long run, so it may be assumed here that both the respiratory and circulatory centres were previously stimulated by the over-heated circulation, and that the respiratory centres failed before the circulatory ones.

As regards the *diagnosis* of these two cases, walking under the direct rays of a summer sun in sultry and oppressive weather for four miles after a heavy meal and the sudden attack of hyperpyrexia with severe nervous symptoms were too palpable to mistake it for any other disease than sunstroke in my first case; but my second case presented many points of difficulty. The previous history of exposure, and sleeping in the verandah till a late hour in the night, the high temperature, the rapid breathing and dulness over the lungs, with harsh and blowing respiratory rales, were likely to lead one to mistake it for a case of pneumonia, specially in such a corpulent subject, and in whom a thorough examination of the chest was almost impossible for the extreme restlessness of the patient; extreme congestion of the brain, with redness of the conjunctivae and delirium are commonly found in many cases of pneumonia.

The only means of a differential diagnosis being made, was the history of suddenness of the aggravation of the symptoms. Pneumonia could not have advanced so far within 3 hours from the commencement of the attack, yet pneumonia in such corpulent subjects is not infrequently found to have commenced so insidiously, as not to have attracted the attention of the patient, or of the medical attendant until it had advanced to the point of suffocation, so that the only *reliable* means of making a differential diagnosis, lies in a *thorough* physical examination of the chest. A careful observer can rarely fail to detect the dulness of hepatisation from that of mere congestion, and the blowing tubular breathing of the former from the harsh and blowing rales of the latter condition; fortunately the indications for treatment would be almost alike in both diseases, namely, the removal of the congestion of the lungs and brain and abstraction of heat from the over-heated blood by application of cold douche, wet-sheet packing, cathartics, antipyretics, dry cupping, &c., &c. Stimulants are as a rule, not required in such cases, and if required at all, much discrimination is necessary in their administration. Hypodermic injection of quinine is much extolled in cases of sunstroke. I have however had no experience with it, nor had I the time or opportunity to try it in these cases.

The *post-mortem appearances* in sunstroke are said to be: fluidity of the blood, congestion of the brain generally, and extreme congestion of the lungs, with dilatation of the right heart. But the peculiar appearance of *blisters* after a few hours of death all over the body is a phenomenon not mentioned in any of the books to my knowledge. It is said that the temperature may rise to 111°F or more, and may continue to rise after death for some time, in fatal cases of

heat apoplexy. But the question is, can it rise to such an extent as to cause blisters to rise on the body by the natural process of cooling by radiation, evaporation and conduction, after death?

In cases where there is a history of direct exposure to the sun, it is easy to understand how the blood gets overheated, but where there is no such history, it is not so easy of elucidation. In order to explain the phenomena presented in such cases, the assumption of the existence of a thermo-genetic, thermo-toxic and thermo-lytic centres in the nervous system becomes the more necessary, for without such a theory, we cannot explain how the mechanism of sustaining a uniform temperature in the human body, placed under a variety of circumstances as regards climatic and dietetic changes, can be so easily disturbed, either by direct exposure to solar heat or by a high atmospheric temperature.

Sunstroke, I consider, is nothing but a form of fever. The disease termed "sun fever" and some forms of simple continued fever are but milder forms of this disease.

The nomenclature is, in my humble opinion, wrong in styling this disease, sunstroke, (heat apoplexy or *coup de soleil*). A case of any other fever with nervous symptoms might just as well be called "fever apoplexy." The generic term "sun fever" (ending in death by cerebro-spinal symptoms, syncope or asphyxia), seems to me to be the more appropriate term by which to designate this disease.

—:O:—

A CASE OF PUERPERAL FEVER OF ABNORMAL DURATION.

By ASSISTANT SURGEON. H. D. PANT, I.M.S.,
Gonda.

Mrs. B. M.D., a Kashmiri primipara, *æt.* about 23, was delivered of a dead fœtus on the 12th December 1894. Slight fever came on on the 15th, ushered in by shivering. I was called to attend her on the 21st. Her temperature was then 102° 8 and had been 106 the previous evening. Pulse feeble, quick, 120 per minute. General condition very low, tongue dry and teeth covered with sordes. She was having rigors two or three times a day, and complained of severe neuralgic pain in the left hip joint, extending downward to the knee. She remained under my treatment till the 17th February 1896, and up to the 8th February the rise in temperature was so irregular and fitful, and was so modified by various antipyretic medicines, that it is difficult to make out a regular temperature chart of any clinical value.

To begin with, ordinary fever mixture was prescribed with spirit vin. gallici and an application of chlorate of potash and glycerine to the tongue and lips. Fever continuing, tincture warburghii in 5ii doses every two hours, was given next day. The same was repeated on the 23rd and 24th, along with a mixture containing potash chlorate and tincture digitalis. No improvement in the fever, but the pulse became stronger and the slow typhoid condition disappeared. The discharge from the womb was offensive, and an ulcer was detected in the vagina. Douching with Condy's fluid and applications of iodoform ointment to the ulcer were prescribed. From time to time large offensive clots and shreds were removed from the womb by

the female Hospital Assistant, who was also in attendance. On the 30th, salicylate of soda in 10-grain doses every four hours was tried.

By the 1st of January, the patient had lost much strength, high temperature continued, and the next day, cough with streaks of blood in the phlegm appeared, with great pain on right side of chest and on the back. The patient was troubled with vomiting, and on examining the chest, pneumonic consolidation of the lower half of the right lung was detected, and by the 7th, the base of the left lung had also become congested. Various kinds of cough mixtures with digitalis were tried for relief with local applications of turpentine and poultices. By the 15th January the expectoration became purulent and offensive. A mixture containing ammonia carb. liq. strychniæ and tincture digitalis was given with creasote pills. Gradual amelioration took place in the condition of the lungs, but on the 21st, congestion and enlargement of the liver set in with symptoms of perihepatitis, causing great dyspnoea and restlessness. The spleen was also enlarged and tender. Quinine in 10-grain doses was occasionally given, but no medicine seemed to have any permanent effect in reducing temperature, which was persistently high. The case was now getting serious day by day.

Bed sores appeared, and the patient was reduced to skin and bone; severe neuralgic pains continued notwithstanding treatment, and low typhoid symptoms supervened. Having tried almost every available drug without much benefit, I resolved on the 30th to try the effects of large doses of quinine sulph. I accordingly prescribed 20 grains of the drug dissolved in acid hydrobrom dil. with 20 drops of chlorodyne in an ounce of water, to be given four times a day. This time the result was a little more encouraging. On the night of the 2nd February, the patient had an unusual hysterical fit. She seemed, all of a sudden, to have gained great strength of body and mind, got up from the bed by herself for the first time since her confinement, moved about, danced and sang, and gave minute details of the occurrences of her childhood which it was believed, she had long forgotten. The result of the night's fit was, that next morning the patient complained of severe pain in the right hip-joint and over the sacrum and coccyx; there was some swelling too, which lasted for about a fortnight. From the 3rd, the quantity of quinine was reduced to 15 grains four times a day. On the 9th the temperature became normal and remained so onward.

Remarks.—It is needless to say that antipyrene or phenacetine had to be given pretty frequently during this protracted illness, and the patient's constitution was supported by liberal nourishing diet and brandy. For full 56 days, she was under the influence of high fever. Hopes and fears alternated. The case was diagnosed and treated from the outset as one of puerperal septicæmia; but I cannot help thinking that there was a strong admixture (more particularly towards the latter part), of malarial poison of a remittent type.

Dr. John Murray reports a case where a boy, *æt.* 17, in an advanced stage of phthisis, used his saliva to mix some pigment with which he tattooed the arms of three other lads, and thus inoculated them with *tuberculosis*, bringing on painful swellings that persisted for a long while, in their axillary glands, while inflammation, swelling and small pustules appeared along some of the tattooed parts.

TWO CASES OF VESICAL CALCULUS: MEDIAN LITHOTOMY: RECOVERY.

By HARRY GIDNEY, D.M.C.C.

Assistant Civil Surgeon, Mysore.

CASE I.—Child aged 2½ years, hill tribe, entered my hospital suffering from all the symptoms of vesical calculus. On examination with a THOMPSON'S sound I detected a stone lying at the base of the bladder. I intended performing a litholapaxy but found that the urethra was too small. Lithotomy was the only other alternative. I had intended performing lateral lithotomy, but could not, owing to there being no lateral grooved staff sufficiently small for use, hence I was compelled, though very reluctantly, to resort to median lithotomy.

The patient was put under chloroform, and a median grooved staff was introduced. I made a median incision, extending from the under surface of the scrotum to the "edge" of the anus. After dividing the superficial soft parts, I pushed the knife on until it impinged against the groove in the staff, it was then pushed, guided by my index finger, until it came upon the prostate, which I notched with the edge of the knife. I then withdrew knife and staff, bearing my index finger still in the wound, but on attempting to introduce the lithotomy forceps, found the parts too small to receive it, and by this time I discovered that my finger had penetrated into a false passage between the anterior wall of the rectum and the bladder. I had lost the path into the bladder. I was thinking seriously of leaving the case alone, when, as a *dernier resort*, I determined to find my way back again by exploring with a blunt-pointed probe. After a careful search for about a quarter of an hour, I came upon the path, and guided by the probe, I passed an ordinary dressing forceps with little or no difficulty, into the bladder. I then opened the blades and caught the stone in its long axis. Finding it to be rather large for the grasp of the dressing forceps, I broke it into two pieces and then extracted the two fragments piece-meal, by means of the dressing forceps, making a slight rotatory movement during the extraction.

A catheter was now introduced through the perineal wound into the bladder (which was washed out with warm boracic lotion, 1 in 40) and left in. All hæmorrhage was arrested, the parts washed antiseptically, &c., and dusted with iodoform and covered over with some boracic ungt. smeared on lint.

The case made an uninterrupted recovery, and was discharged, quite cured, on the 13th day after the operation.

CASE II.—Child aged 2 years, hill tribe, came into the hospital, having all the symptoms of vesical calculus.

All further particulars in this case are identical with those in Case No. 1, (except that there was a good deal of hæmorrhage, which took me a little time to control), it is therefore unnecessary to recapitulate them. The little patient made a complete recovery; the wound healing up by the twelfth day after operation.

Remarks:—(a) The parts in both cases were so small that the lithotomy forceps could not be used without fear of bruising the neck of the bladder. I had therefore to resort to an ordinary dressing forceps, which answered the purpose just as well. The only difficulty I experienced whilst extracting the stone was, that owing to the blades of the dressing forceps being so small, and not concave,

a firm hold of the stone could not be got so easily, and the stone in consequence slipped from the grasp on one or two occasions.

(b) The difficulty experienced in the after-treatment in both cases (especially in Case I.) was, that the catheter constantly came out, the child being so restless. This to a certain extent I remedied by tying the two knees together with a firm bandage.

(c) The danger likely to arise when one gets into a false passage (as occurred in Case I.) demonstrates the cardinal rule, "never to withdraw the staff until we are certain that the index finger is within the neck of the bladder."

(d) Litholapaxy and lateral lithotomy are operations to be preferred in children; but I was precluded from performing either, by reasons already given.

INJURY TO HEAD CAUSING LOSS OF SPEECH FOR DAYS: RECOVERY.

By ASST. SURGN. ROMANATH DE, M.B.,

Madaripore.

PANCHU, a Hindu male, aged 30 years, was brought by the police into hospital, on the 14th March 1895, with a swelling on the front of the head, said to have been caused by being struck with a piece of bamboo.

Condition on admission.—There was a large swelling on the middle of the front of the head which pitted on pressure. The patient was quite conscious, could move about easily but could not speak at all. No paralysis of any of the organs. Conjunctivæ slightly congested. Pupils normal.

Previous history.—The patient, after recovery, stated (which statement was corroborated by that of his father) that on the 12th March, i.e., two days previous to his admission into hospital, he was struck in a field close to his house by another man (with whom he had had some dispute about a piece of land), on the head by a thick bamboo, from the effect of which he immediately became unconscious and fell down. He was then removed to his house, and after an hour or so, recovered his senses, but lost the power of speech completely.

Treatment.—I kept him under observation for a couple of days with cold application to the head. On the third day, I gave him an opening medicine, consisting of 20 grains of pulv. rhei. co., and 3 grains of calomel, which thrice moved him freely. On that day, the swelling on the head subsided completely, but there was not the least improvement in the power of speech. On the following day I gave him 3 grains of iodide of potassium with an ounce of infusion of chiretta to be taken thrice daily. He continued in the same state, till the 24th March, i.e., the eleventh day of admission, when for the first time I noticed that he could speak, though very indistinctly. There was great improvement on the following day, and he made an uninterrupted recovery till the 29th of March, when he was discharged perfectly cured, after having been in the hospital for 16 days.

Remarks.—The case is a unique one. I have never come across one similar to this during my student-life, nor during the whole course of my professional career extending over a period of 10 years, both in Bengal and Burma, nor am I aware whether any of your numerous readers have met with a like experience. It is evident that there must have been some injury to the 3rd left frontal convolution (Broca's), which interfered with the faculty of speech, but the wonder is that along with this there were no other symptoms of cerebral derangement.

OUR PICTURE GALLERY.

MISS FLORENCE DISSENT, M.B.

L.B.S.P., L.M.S.S. (Edin.) L.V.P.S. (Glas.)

THE portrait which embellishes our "Picture Gallery" is that of a young lady, whose career has been one of such marked success as to afford a striking illustration of what can be accomplished by patient self-denial on the part of Anglo-Indian parents with only limited means at their command, and by resolute perseverance on the part of children, born and educated for the most part in this country.

MISS FLORENCE DISSENT, the subject of our notice, is the youngest daughter of Mr. C. E. DISSENT, a prominent and widely-respected member of the Anglo-Indian community. She was born in Calcutta on the 8th of July 1869, and received her early training at home under the direction of her parents, who, she gratefully acknowledges, laid deep the foundation of the successes she has achieved in her distinguished academical career. At the age of eight, she was entered as a day-pupil in the Loretto Convent in Middleton Row, Calcutta, where she continued to the age of fourteen. Her father having in the meantime been elected a member of the Committee of Management of the Doveton College, she was transferred to the Doveton Institution for young ladies. There she remained until the year 1886, when a great and good work in India was set on foot by the noble lady, whose name will ever remain associated with the movement. We allude to the establishment, under the auspices of the Countess of Dufferin, of classes in the Medical College for the training of lady doctors to enable the women of India to obtain medical aid from those of their own sex. Mr. DISSENT was among the first to recognise the possibilities which this movement was calculated to open up to young women born and educated in this country, of attaining to an honorable independence. Accordingly, at the instance of her father, Miss DISSENT now determined to direct her energies to the study of medicine. Having easily passed the preliminary test required by the regulations, she was enrolled in March 1886, on the books of the Calcutta Medical College. At the conclusion of the four-year course, she obtained the gold medal for medicine, four honor certificates for proficiency in dentistry, hygiene, ophthalmic medicine, and pathology respectively, and the diploma of the College. Her success as a student did not escape the keen observation of Dr. J. M. COATES, the Principal of the College, on whose recommendation Miss DISSENT was at once placed in medical charge of the hospital and dispensary for women at Naini Tal, a post she held for seven months. In recognition of her services, the Naini Tal Committee strongly recommended Miss DISSENT to their Central Branch, and she received the important charge of the Allahabad Dispensary and Hospital, then recently opened. For two years Miss DISSENT discharged, with conspicuous ability and success, the onerous duties connected with this, one of the largest of the Dufferin hospitals in the North-Western Provinces and Oudh. In addition to the usual routine of hospital work, Miss DISSENT rendered material help to the Civil and Assistant Surgeons in training a large class of nurses by giving them lectures and practical demonstrations in the wards. On her health threatening to break down, the Allahabad Committee marked their appreciation of Miss DISSENT's services, by sending her for four months to Naini Tal, when she once more resumed her old charge. The Naini Tal branch was anxious to obtain her services permanently, and with this object in view, offered her liberal terms; but about this time an opportunity was afforded her of proceeding to Europe to further her medical studies. She left India in March 1893, and after a temporary rest enjoyed on her by the medical authorities in London, Miss DISSENT was admitted in October as a student in the London School of Medicine for Women. On completing a course of three months, during

which she walked the wards of the Royal Free Hospital, Gray's Inn Road, Miss DISSENT proceeded to Edinburgh to prepare for the triple qualification of the Royal Colleges of Edinburgh and Glasgow. She appeared for this examination in April 1894, and so well did she acquit herself in it, that we hear some of her papers were read out by the professors to the class of male students in the Edinburgh College. Having now obtained the triple qualification of L.B.C.P. and L.R.C.S. (Edinburgh) and L.V.P.S. (Glasgow), Miss DISSENT finally passed over to Brussels, when she obtained the degree of Doctor of Medicine with distinction, in May 1894.

MISS DISSENT has recently returned to India, and we are glad to learn that she has been offered a first-grade appointment at Ulwar in connection with the Dufferin Institution for the employment of lady doctors.

This little biographical sketch affords food for serious reflection. We see here energy of action and perseverance leading to pronounced success. But underlying these, is the united action of the parents, both solicitous for the welfare of their child, both working towards the same end, and loyally helping each other to attain the same object.

We have gone out of our usual routine in honoring Miss DISSENT with a place in our Picture Gallery, which has hitherto been reserved for members of our profession, whose length of service, or experience of tropical disease, other special qualifications, which have been of material value to the country and the State, have called for some special mark of public appreciation, such as our gallery affords, but we feel that no apology is needed in placing Miss FLORENCE DISSENT in the honored position she now occupies among our illustrations of "the worthies" of our profession. The occasion offers an object lesson to which we would draw the pointed attention of our domiciled European and Eurasian confreres, who have grown-up daughters for whose future welfare they must of necessity have many anxious cares. It is seen pretty commonly around us that now-a-days young ladies cannot look to marriage as the certain consummation of their hopes and that unless the means of earning an honorable livelihood have been sought after and provided, it but too often happens, that they are left to the mercy of the world and the world is cruel enough to the helpless and friendless. We are constantly appealed to on behalf of the daughters of medical men in India, who are left unprotected for at the death of their parents, and the sad fact brings home the conviction that in many instances a noble and substantial provision against such calamities could easily and effectually have been at hand, were the helpless and grown-up orphan girls prepared by special education and training during the lifetime of their parents, to earn their own living. Many avenues of work are open to our girls, but none offers so splendid an opportunity for usefulness to women in any other part of the world, as medical practice by women among the women of India. The zenanas will remain closed to men physicians for another century, and all this while women physicians have to themselves an unexplored field of service that is unsurpassed in its possibilities for doing good. It is to the Dufferin Fund Service and to the independent practice of medicine among the women of India that we earnestly desire to direct the attention of medical parents. Miss DISSENT's excellent success will, we sincerely hope, urge many European, Eurasian and Indian young ladies to follow her footsteps and emulate her example.

Chloroform inhalations &c. in 3II to 3III quantities per day supplemented by hot baths and sometimes by morphia subcutaneously, gave P. A. Probramsky excellent results in the treatment of acute trismus, the spasms ceasing and the muscles relaxing, while the pulse becoming stronger and slower, and the respiration deep and regular, the patient fell into a quiet sleep of several hours' duration.



*Yours Sincerely
Florence Lisant*

THE Indian Medical Record.

1st May, 1895.

TYPHOID FEVER: ITS CAUSE AND TREATMENT.

THERE has been not only in India but it may almost be said universally a growing interest in all matters relating to typhoid fever. Much of this interest and of the increased concern of the profession with this disease is, no doubt, a part of the profession's revision of its knowledge of diseases in general, such revision being the necessary result of the germ theory of diseases. It will not be amiss then to embody some of the opinions and experiences contributed to many of the journals of the day on the causes, symptoms, and treatment of enteric fever. As to its cause, it is maintained by some that a certain bacillus is peculiar to this disease alone, it is said by others that the bacillus is none other than the *bacterium coli communis* of the large intestines which under certain conditions invades the small intestines and multiplies there. Conversely then, while on the one side sewage, filth or anything else taken into the system cannot cause typhoid fever, save and except they contain the specific germs of typhoid, on the other, they may serve as nurseries for the growth, reproduction, and migration from their habitat of the *bacteria coli communis*. DR. ERNEST HART is of opinion that the typhoid germ in India and warm climates has a different history from what it has in England; in the former case epidemics of typhoid appear to arise *de novo*, while in England they seldom or never do; in other words, in England the typhoid germ, though able to live for a time as a saprophyte to exert its virulence only after resuscitation by passing through the human body, but in certain warm climates the germ is a genuine saprophyte, retaining its virulence as an inhabitant of the soil, and not needing "periodical resuscitation in the human body to confer on it pathogenic properties." These views are also held by DAVIDSON and by HUNT with reference to typical cases of typhoid in North Queensland, by CRAWFORD of the occurrences of the disease in Afghanistan, and HOFF in the United States. Hence in these countries sanitary measures are infinitely less efficacious than in Europe in preventing the disease, and herein is supposed to lie some explanation of the prevalence of typhoid among young soldiers in India. Whether however the germs, whose activity and reproduction are causative of the disease, have their habitat in the soil or in the human system, there is much reason to believe that certain atmospheric conditions and influences develop or increase their pathogenic properties.

Treatment.—We cannot do better than begin this compilation of opinions on the treatment of enteric fever with the remark of SIR WM. BROADBENT, M.D., of St. Mary's Hospital, London, *viz.*, that "there is no better test of clinical sagacity and capacity than the conduct of a case of typhoid fever." It is very important that a diagnosis be arrived at as early as possible, and that from the very commencement of the treatment the most absolute rest, physical and mental, be strictly enjoined. The management and treatment of a case of typhoid fever may be divided into three heads, *viz.*, the (1) hygienic, (2) the dietetic,

and (3) the therapeutic. There are no special remarks to be offered with regard to the first of these; but for the carrying out of the details under this and the other heads the provision of thorough, well qualified, and efficient nursing cannot be too strongly insisted on. The patient's room should be well ventilated, the temperature of the room should be even and agreeable, and a moderate amount of natural light admitted into it, everything should be done to make the surroundings as conducive as possible to quiet and repose. All excreta should be promptly removed and thoroughly disinfected.

The dietetic management of a case of typhoid is one that demands a deal of discrimination and observation. SIR WILLIAM BROADBENT remarks: "An absolutely indispensable guide to the feeding of a patient is regular and systematic inspection of the dejecta. This is the secret of success in the treatment of typhoid fever." Almost all are agreed that good milk is positively the best food for typhoid cases, and three pints of it should ordinarily suffice. Eight ounces may be given every three hours. The addition of lime water or of soda water is generally recommended, and this addition is particularly necessary if the evacuations contain curds, however finely divided. If the patient dislikes milk, beeftea or meat extracts may be substituted; and the return to eggs, toast-bread and vegetables must be very cautiously allowed and regulated after the temperature has fallen to normal for five or six days. The matter of the administration of stimulants has always been one on which there has been much difference of opinion, and perhaps it will ever remain one which will demand very judicious observation. The points of agreement on this matter appear to be that they are seldom if ever required at the early part of the disease, but are called for when there is exhaustion of the nervous system, failure of the circulation, or failure of digestion. DR. BROADBENT'S advice is that they be given when there is frequency and low tension of the pulse, mental confusion, dryness of the tongue, and prostration; and they may be assumed to be acting beneficially if the pulse-rate is lowered, the temperature somewhat reduced, the nervous system steadied, and more restful sleep secured under their influence. The persistent odour of alcohol in the breath is an indication that the stimulant is doing harm. Drunkards and habitual alcohol consumers are better by abstinence and strychnine or nuxvomica. The stimulant should be given with the nourishment. Two or three ounces of brandy in divided doses should usually suffice, and ten ounces may be taken as the maximum which may be given with benefit and safety in twenty-four hours.

Ought we to medicate? This may appear a strange question, but one at the same time quite legitimate, when we consider that it is easy in this disease to commit ourselves to harmful medication, for DR. CASLAR believes that the disease "is not to be treated by medicines." The wide range of remedial agents recommended and the different plans of treatment advocated may be reduced to two heads:—(1) antiseptic and (2) antipyretic. Considering that the disease is due to a poison, and that the symptoms are the result of that poison on the system, it is reasonable that our efforts should be directed towards eliminating or destroying that poison, and towards counteracting its toxic influence. DR. BROADBENT points out that

though the typhoid microbe, soon invades the blood and tissues, where it is improbable that they can be destroyed without serious injury to the blood and tissues, yet it must be remembered that the bacteria exist in the intestinal tract, where by their action, they produce other septic material. For this and other reasons the old management of a case of typhoid in the initial stage, has undergone quite a change; for whereas the administration of a purgative was religiously avoided about twenty years ago in the early stage of typhoid, English and American authorities have begun to pin their faith on the benefits of calomel advocated by LEIBERMEISTER, on the administration of purgatives early, and on high injections for clearing the intestines of useless and harmful matters. Salol, the mineral acids, nitrate of silver, quinine, iodine, sulpho-carbolates, and a host of other medicines have been used as intestinal antiseptics with varying good effect; but Sir Wm. BROADBENT lauds the perchloride of mercury as the most efficacious, and advises its use in one drachm doses of the solution with one grain of quinine every 3 or 4 hours for a day or two. Pepsine and the mineral acids appear to prove very beneficial. The purgatives and antiseptics alluded to, by clearing out and disinfecting the alimentary canal, mitigate nervous symptoms and intestinal irritation; so that maniacal delirium, stupor, diarrhoea, and abdominal distension are relieved by their use. Tympanitis, which is always a painful accompaniment of the disease, is said to be kept off by the above-mentioned antiseptic forms of treatment. Acute tympanitis, whenever occurring, is always a sign of danger, and is best relieved by half drachm doses of tincture of opium. Bleeding from the bowels is stopped with ice bags over the right iliac fossa, subcutaneous injection of ergotine, and full doses of opium. The only chance for the patient in case of suspected perforation is the fearless use of opium. Insomnia in typhoid is a condition which often taxes the medical attendant's resources, and of the various medicinal agents employed to combat with this symptom, Dr. BROADBENT considers phenacetine and antipyrin depressing and hence mischievous, chloral lowering to the heart's action, bromides seldom of real service, and a preparation of opium or of morphia the most serviceable. It is more or less generally conceded that every effort should be made to relieve hyperpyrexia, no matter in the course of what disease it may occur, and perhaps it is as to the means to be employed for the reduction of temperature that there is the greatest diversity of professional opinion. Antipyrin, phenacetin, and powerful antipyretics of this ilk, which were once thought to supply all that was needed to reduce body heat, are fast losing favor, and have but few advocates, particularly as to the advisability of their employment in the hyperpyrexia of typhoid fever. Dr. BROADBENT speaks of these remedies not only as failures, but as positively harmful; and ROQUE and WALL have found that "antipyrin arrests the elimination of toxins by the urine without preventing their formation." Our American brethren, however, still advocate their employment in moderate doses, cautiously given and in combination with stimulants. The application of water in one form or another is in general favor. Cold or tepid sponging of the body seldom fails to afford comfort. With American practitioners, the bath

used in all detail after the method of Brand, is so very extensive and giving favor, but most of them now warn against the disadvantages and expense of its employment in private houses. Statistics both in American and English fever hospitals, however, show that by its adoption typhoid mortality has been reduced to 5 per cent. and under. The continuous abstraction of heat by water is spoken highly of by Dr. BROADBENT. This is the method adopted by Dr. BAER of the Northern Hospital at Liverpool, who uses the continuous bath for the more severe cases, and wet compresses to the abdomen in the slighter ones.

MISAPPLIED POWER BY THE CALCUTTA HEALTH OFFICER.

IN his zeal to leave no stone unturned, Dr. SIMPSON, the Health Officer of Calcutta, has caused the following notice to be affixed to the gates or compound walls of houses in which Municipal Inspectors have reported to him that persons afflicted with small-pox were resident:—

"You are hereby informed that by remaining in you are spreading or likely to spread contagion of small-pox; and you are warned that unless you within 12 hours remove yourself to Hospital, you will be prosecuted before a Magistrate under section 269 of the Indian Penal Code.—W. J. SIMPSON, M.D., HEALTH OFFICER."

In applying this threat, no consideration has in any case, as far as it has been brought to our notice, been shown for the circumstances of life of the sufferers, nor of their environments. We pointed out in our last article on the recent small-pox epidemic in Calcutta, that incompetent Municipal Inspectors had in some instances reported cases of chicken-pox as cases of small-pox. Of this fact we do not write from hearsay alone, but from actual personal knowledge. Ignorance displayed in the matter of the diagnosis between a benign and a malignant disorder is fraught with the most serious and disastrous consequences. The Campbell Hospital, which has sheltered the victims of small-pox, makes scant provision for the differentiation and segregation of cases of varying type and virulence. Thus when the modified, the confluent and the malignant forms of the disease are herded together, in obedience to the law of contagion, they may readily react on one another, and thus the victim of a simple, and almost harmless, febrile eruptive disorder may speedily absorb the more deadly germs around him and discover that the place of his shelter and protection has consigned him to a fearful and ghastly doom. This may seem but a graphic and tragical picture of the imagination, but unfortunately it is only too true, and accentuates the urgent and imperative need that exists for a contagious hospital, affording accommodation in the arrangement of its wards for the varying degrees of epidemic contagious disease and also for suspicious cases to be kept apart under observation.

In the absence of such a hospital, the cruelty and injustice of the action of the Health Officer in indiscriminately placarding the homes of the people with threatening penal notices, becomes all the more glaringly apparent. We have no desire to accuse the Health Department of the Calcutta Municipality of wanton indifference or of intem-

tioned from meeting, but we have no hesitation in condemning the present practice of compelling people afflicted with small-pox, and much more so of those having some other suspicious form of eruptive fever, under the fear of criminal prosecution to hasten away to a hospital whose scant provision for the medical attendance, nursing and accommodation of the sick, has made it a proverbial charnel house, to leave their comfortable homes and their loved ones, where every care is being exercised not alone for their recovery but where modified and effective segregation, disinfection and fumigation are rigidly observed under the instructions of their attendant family physicians. Another feature of the Health Officer's threatening notices that is extremely objectionable and unprofessional in its arbitrariness, is the fact that such notices, when served upon respectable families, having a doctor in attendance, who is employed in rigidly enforcing all the sanitary precautions to prevent the spread of contagion, ride roughshod over the family physician's professional qualifications and responsible duties, a line of action that is preposterous and proves that the conduct of the Health Officer is not only absolutely uncalled for but distinctly illegal. For there is no power conferred upon the Health Officer by any Act of the legislature which authorises him to worry and annoy and frighten decent people out of their homes, where they are being properly protected and cared for, and where the spread of contagion is being safeguarded under the direction of a qualified physician, forcing them by his high-handed officiousness into imperfectly equipped institutions where a harmless disease is liable to assume a fatal form. It is well that the public should know that "a man's home is his castle," and that Dr. SIMPSON's threats are a vain and arbitrary exercise of mistaken authority, save and except when there is a flagrant disregard for those precautions that are calculated to prevent the spread of infectious disease. We would go further and warn the Health Officer to desist from his present practice of indiscriminately threatening the public, for there is danger to the Municipality in his action, as if it can be proved that by cause of any such notice served on a person suffering with modified small-pox or chicken-pox, compelled by fear of ignoring such notice, to enter the Campbell Hospital, and that while there, such person has developed a malignant form of disease, a claim for serious damages would inevitably lie against the Municipality.

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THE INDIAN MEDICAL ASSOCIATION.

In compliance with the notices issued, the fourth meeting of the Council of the Indian Medical Association was held in its Library on the 17th April 1895. Present: DR. LAL MADHAB MUKERJEE, President, in the chair, DR. E. W. CHANDLER, J. G. ANDERSON, H. C. HODGKINS and J. R. WALLACE. After reading and confirming the minutes of the third meeting of the Council, the following items of business were brought forward:—

1. The Secretary read a letter from the Surgeon-General with the Government of India concerning the memorial from the Association, regarding the grievances of Civil Assistant Surgeons and Civil Hospital Assistants, which memorial is now receiving due consideration at the hands of Government.

2. Read a letter from Surgeon-Captain A. BISHU SRANKA, Civil Surgeon of Jalpaiguri, forwarding an appeal from Mr. ANANTA LAL MANDAL, V.L.M.S., Civil Hospital Assistant of Jalpaiguri, to the Secretary of the Indian Medical Association, requesting the help of the Council to obtain sanction for Mr. MANDAL to appear for the F. A. Examination of the Calcutta University, in view to his graduating L.M.S. & M.B., Calcutta. The appeal was forwarded by the Council with its recommendation to the Vice-Chancellor of the University of Calcutta. The Secretary also read the reply to the above appeal from the Registrar of the University, who stated in reply, that the provisions and rules of the University refer to graduates of the Calcutta University, and not to vernacular licentiates, and therefore Mr. MANDAL's appeal could not be accepted. This decision was forwarded to the applicant.

3. The Secretary announced that the Library of the Association had received a donation of Rs. 500 from H. H. SIR BHAGVAT SINGHI, M.D. K.C.I.E., Thakore Sahab of Gondal and Vice-President of the Association. The Council resolved to send a vote of thanks to His Highness for his princely gift; which has been done.

4. The Secretary proposed the names of sixty-two new members who had applied for admission to the Association since the Council's last meeting. It was resolved that they be duly elected. Their names have been published in the *Record*.

5. In view of the approaching elections to the Legislative Council of the Lieutenant-Governor of Bengal, after due discussion of the matter, the following draft letter was resolved upon and has been submitted:—

From

THE SECRETARY,
Indian Medical Association, Calcutta.

To

THE CHIEF SECRETARY,
Government of Bengal, Darjeeling.

SIR,

In view of the forthcoming elections to the Legislative Council of the Government of Bengal, and having due regard for the power vested in HIS HONOR THE LIEUTENANT GOVERNOR OF BENGAL, to receive the nominations of such associations as His Honor may prescribe as coming within the action of the COUNCILS ACT, I am directed by the Council of the INDIAN MEDICAL ASSOCIATION, to solicit the privilege of permitting a representative of the INDIAN MEDICAL ASSOCIATION, which represents the local medical profession—not only of Bengal but of India and Burma—to have the honor of a seat in the Legislative Council of the Government of Bengal.

In view of the possible sanction of their request, the Council would most respectfully beg to nominate NAI LAL MADHAB MUKERJEE, BAHADUR, L.M.S., F.C.U., Honorary Presidency Magistrate of Calcutta, the President of the Indian Medical Association as their representative.

I have the honor to be

Sir,

Your most obedient Servant,

JAMES R. WALLACE, M.D.,
Secretary, Indian Medical Association

7. The Secretary laid on the table an artistic design of the *CERTIFICATE OF MEMBERSHIP* for the Association, which, after great care and thought and the criticism of various talented artists, had been decided upon as a suitable form of certificate. The Council expressed their approval of the design, and gave the Secretary authority to order its execution.

8. Upon the representation of the Secretary to the Council, of numerous letters received by him from Civil Apothecaries complaining of their grievances, and requesting the Association to move the Government of India on their behalf, it was resolved that the Secretary do forthwith prepare a draft letter on the subject for early submission to Government by the Council.

9. The petty bills of the office being passed for payment, the meeting was brought to a close.

COMMENTS AND NEWS.

MEDICAL BLACKMAILING AND SCANDALMONGERING EXTRAORDINARY.

We quote from the *New York Medical Record* :—

"A long dispatch from London, published in the *Sun* a few days ago, brings into prominence what seems destined to lead directly to the culmination of the feud that has cropped out every now and then between MR. LAWSON TAIT, the great Birmingham surgeon, and some of his professional brethren belonging in London, particularly MR. ERNEST HART. It is in the form of a pamphlet to the publication of which DR. CUSHING, of Boston, seems to have innocently spurred MR. TAIT on by publishing the following statement :—In the light of facts recently placed on evidence concerning TAIT, his statistics have far less weight with the surgical world than was the case a year or two ago."

"MR. TAIT wrote to DR. CUSHING to ask what the facts were to which he had alluded. In reply, DR. CUSHING rehearses a scandal to the effect that MR. TAIT had seduced one of his nurses, and then, after having pledged himself to support the illegitimate child of which he owned to being the father, refused after a time, to continue such support. MR. TAIT then wrote back denying the whole story and impugning its relevance. In the course of this letter MR. TAIT says :—

"As to the story, it is a lie, or rather a tissue of lies, from beginning to end. Two women, sisters, entered into a scheme to blackmail me; one a nurse dismissed for insubordination, and one on whom I had done ovariectomy, and they had claim to £16,000 as hush money. They never got a shiver of that money, and the case never came to trial for the reason that you will see in the published account of it which I inclose. The case never came to trial, never a scrap of information appeared in the public press, much to my discomfort, but the plaintiff's story was spread abroad as a means of coercing me to pay hush money, and chiefly by members of my own profession residing in London. I stood firm to fight, as, unfortunately, too few men, placed as I was, do. The plaintiff's traded on the belief that a man in my position and as rich as I was, would pay up rather than have my name tarnished. But I would have spent my last shilling, and my wife would have sold her wedding ring, before I would have been bled in such a way. The case collapsed after nearly two years of legal dodging, and I never had an opportunity of proving the utter falseness of the charges made against me. Your informant may not have known this, but I suspect he did. Dates would prove this."

"MR. TAIT inclosed a photographic copy of the witness's retraction, duly witnessed, as follows :—I unreservedly withdraw all statements and suggestions at any time made by me or on my behalf that you ever assaulted me or took advantage of me in any way while I was under the influence of liquor or under any other circumstances. And I also unreservedly withdraw all other charges, imputations, and reflections at any time made by me against you."

"DR. CUSHING, thereupon, as in honor bound, gave MR. TAIT the name of his informant, who turns out to be MR. ERNEST HART, the editor of the *British Medical Journal*, now in India, and loyally offered to make any apology that MR. TAIT might require, and to give his testimony, if necessary, even in an English court. When MR. HART gets back to London we may perhaps be told how such a monstrous scandal got afloat."

THE EXAMINATION FOR THE L. S. A., LONDON.

We quote for the benefit of our readers the following questions for the Final Examination for the Triple Qualification in Medicine, Surgery, and Obstetrics, or the L. S. A., London, which is the only single diploma that qualifies for admission into the A. M. S. and I. M. S.

Medicine.—1. What are the consequences to the heart, recent and remote, which follow upon rupture of one of the aortic valves? What symptoms and physical signs would be found in such a case a year after the accident to the valve? 2. How would you investigate and decide upon the nature of a case of slight general dropsy? 3. Describe a case of acute suffocative bronchitis in a young adult. What physical signs would be presented by such a case? How would you treat it? 4. What symptoms and physical signs would be likely to be found in a case of granular disease of the kidneys? What are the chief dangers to life attending this condition? 5. Describe a case of tubercular peritonitis in an adult, its access, progress, and course. What other conditions of disease might such a case resemble, and how should the diagnosis be made? 6. Give the diagnosis between general paralysis of the insane, and disseminated sclerosis.

Therapeutics.—1. Write prescriptions containing, respectively (a) arsenious acid; (b) antimony potassium tartrate; and (c) carbonate of iron. 2. What are the ordinary therapeutical uses of belladonna?

Pathology.—1. What is an infarct? What are its local effects? 2. What pathological lesions are commonly associated with ADDISON'S disease? 2. What structural alterations are generally caused in the lungs and liver by long-standing obstruction of the mitral valve? Describe the microscopic appearances of the liver in such cases.

Surgery.—1. Describe the varieties of psoriasis, and the treatment to be adopted. 2. What are the positions in which fracture of the pelvis may take place? State the signs which may be present, and the treatment in each case. 3. How would you recognize the presence of fluid in the peritoneal cavity? Differentiate between that condition and ovarian tumours. Describe the operation of paracentesis abdominis. 4. Describe fully the course of development of a psoas abscess; give its signs, symptoms, diagnosis, and treatment. 5. Describe a case, in which the presence of gall stones necessitates the operation of cholecystotomy.

Surgical Pathology.—1. How do you explain the presence and growth of the several varieties of loose bodies which occur within joints. 2. Describe the changes which occur in the tissues affected in CHARCOT'S disease.

Anatomy.—1. Describe the operation of ligature of the common carotid artery, and enumerate the anatomical by which the circulation is re-established. 2. Mention the lines

of the bone, and the structures cut through in removing the upper limb, with the scapula from the body.

Midwifery.—1. A woman has been many hours in labor; the membranes have been ruptured a long time; she complains of sudden pain in the abdomen, and is seized with faintness; there is slight bleeding. Discuss the nature of the case, and the treatment you would adopt. 2. Describe the various methods of artificially feeding an infant a week old. 3. Discuss the etiology, pathology, symptoms, and treatment of puerperal eclampsia. 4. Describe the mechanism of labor in occipito-posterior positions of the vertex.

Gynecology.—1. Describe the healthy secretions met with in the female genital canal, and the alterations they undergo in disease. 2. Describe some of the commoner causes of suppuration in the female pelvis, giving the differential diagnosis and treatment.

Forensic Medicine, Hygiene, and Insanity.—1. Describe the symptoms and treatment of acute poisoning by antimony, and state in detail how you would use MARSH'S test. 2. Define and give examples of a delusion, an illusion, and an hallucination, respectively. 3. What measures would you employ to prevent the spread of diphtheria in a school in which some cases had occurred? 4. A corpse is found in a canal with a contused wound on the head. How can it be determined whether the injury, or drowning, is the cause of death?

OPHTHALMIC SURGERY IN INDIA.

As an evidence of the very large amount of ophthalmic work occasionally done in a village district of India, we may place the following on record. The *Lancet* writes "A few weeks ago, Surgeon Lieutenant-Colonel G. C. HALL, F.R.C.S., Eng., surgeon to the Allahabad Eye Hospital, was called upon to operate on a patient in a village in the province of Oudh. The village was some twelve miles from the railway and twenty-six miles from any English station. No means were taken to let the people in the surrounding villages know of the intended visit of an ophthalmic surgeon to their neighbourhood, but the news nevertheless spread. Surgeon Lieutenant-Colonel HALL lived in camp. The natives arrived in various ways—some in bullock carts, having been four or five days on the road, from distant villages; some came on foot, led by others not quite so blind as themselves; others were carried on the backs of their relatives. A large number had no eye left to be dealt with, but all had a large amount of faith. It was altogether an extraordinary and weird spectacle to see these poor helpless people coming into camp in the early morning and quietly sitting down in groups patiently waiting until their turn came. During six days the total number of patients seen was 894, the total number of cataracts extracted 69, and the total number of operations performed was 147. The operations were all done in the open air under the shade of a large mango tree, the patient lying on a native bed, the operator sitting at the head of it. As far as possible, all the cases were treated antiseptically, and notes were taken of them, with the prognosis formed at the time of operation. When Surgeon Lieutenant-Colonel HALL left, which he did on the sixth day, a native assistant remained to look after the patients, to whom sixty-five pairs of spectacles have already been forwarded for the successful cases. We think our readers will concur with us in considering that the foregoing account records an enormous amount of hard and successful work of a most humane and philanthropic kind, of the accomplishment of which any one may well feel proud."

THE FISH SUPPLY OF CALCUTTA.

MORE than half of the fish eaten in Calcutta is obtained from that huge network of tidal creeks, swamps, *shals*, *jungle* and bunds known as the Salt Water Lakes, a region occupying some 30 square miles, stretching from Dum-Dum to Garriah, and contains the "square mile" where the Corporation of Calcutta "dumps" the street sweepings and garbage of this town. Through this "square mile" flows the hideous canal that carries the night-soil of Calcutta and its suburbs into the Gurriah tidal creek. Round about Katatollah, a large fishing village at the edge of the Sunderbunds, exists a very Golgotha of bones, shells, fish-bones and all manner of rotten abominations in every stage of decay; but furnishing enormous wealth in the shape of shell-lime and agricultural phosphates. This entire tract is leased by a *Kuruman* family, who have sublet portions of it to hundreds of *jellahs* (native fishermen) who are actively employed in trapping the fish by net, weir, spear or hook, and then taking their captures to Chingrihatta and Balliaghatta, whence they find their way to the Calcutta markets. The Bhagirathi, Jellingi and Matablauga rivers add their quota, and huge quantities of fish are also brought by rail from Goalundo. Enormous quantities that cannot be immediately used are salted down, dried or cured in tamarind, prior to being sent to market. The prawn and crab supply comes entirely from the lakes and tanks, and lobsters from the rivers; while some of these crustaceans are obtained from very doubtful sources. There is not a single species of fish, hooked, netted, speared or dug out of clay, which is not eaten by the natives, but luckily no poisonous species are found in the rivers, swamps or tanks of Lower Bengal. It may also be remembered that large quantities of fish are recovered from the fresh water tanks of Calcutta, where they have been propagated from "fry" caught in the districts above alluded to.

THE INSANITARY BOARD OF MADRAS.

MADRAS has always been unique for anomalies and administrative curiosities, but whenever it indulges in its love of singularity, it contrives to be in the wrong. Till lately the Madras Board of Sanitation consisted of two members: The Sanitary Commissioner (DR. KING) and the Sanitary Engineer (MR. JONES). The former complained to the Government that the latter never consulted him in sanitary matters, nor informed him of any such schemes having been proposed or being in course of execution, but "left him to ascertain the nature of such works as best he may from the public prints or during his inspection tours from such few papers as may incidentally have been communicated to the public bodies concerned, to whose courtesy he is indebted for their perusal." DR. KING furthermore complained that he was deliberately kept in ignorance of the very existence and issue of many important matters, and that even "Government orders on sanitary engineering matters" of sufficient public interest to be "placed on the editor's table" were not sent him for perusal. Madras slept over this complaint and perhaps would still be sleeping, but commenting on this deliberate ignoring of the *senior* member by the *junior* member of the Sanitary Board, the Government of India thinks that the Sanitary Engineer should work as much as possible in concert with the Sanitary Commissioner, without whose knowledge no project should have been submitted to Government, and as the former Board has not in all respects fulfilled the expectations that were formed of it, the Government considers that it would be strengthened by the addition as President, of the Chief Engineer, Public Works Department.

RUBBISH INCINERATORS.

FIVE years back, MR. HARRINGTON persuaded the Calcutta Municipality to erect the huge columns, that over-topping everything else in its vicinity half poisoned the neighbourhood, by the dense columns of noxious smoke it vomited forth and showed its utter incompetency to effectually deal with Calcutta's indescribable rubbish. Subsequently another incinerator was run up at the edge of the salt marshes, where the results obtained, though not quite perfection, are somewhat more satisfactory, and MR. HARRINGTON contemplates improving upon his method with a view to more perfect combustion, less smoke and noise, and set in place of the clinker now obtained. At Bombay excellent results have been obtained from MR. GARVIN's pattern, in which an engine, driven by the burning rubbish, maintains a forced draught and practically no clinker is produced. The GARVIN, whose special claim is the incineration of human faecal matter, is being experimented upon at Umballa. If India is to be served by incinerators, something less expensive than the English type of apparatus must be contrived, declares *Indian Engineering*, and we concur. The GILCHRIST is so far the cheapest, as it requires no forced draught, yet effectually deals with the rubbish and effects matter of 2,000 persons, *per cell*, and each cell costs only Rs. 480. MR. ROBERTS of MESSRS. RUEN and Co. seems to be on the right road to combining economy and worth, as the incinerator at *Honorah* has so far given the best results towards absolute combustion of the rubbish and destruction of the more noxious of the gaseous products of combustion obtained by any of the apparatus hitherto experimented on in India.

BACTERIOLOGICAL INVESTIGATION IN INDIA.

IN a lengthy letter addressed to the Government of India, MR. ERNEST HART deplors the want of bacteriological work in this country, and while deprecating the insane system of vesting two kinds of duties requiring very different kinds of knowledge in one and the same person, points out that the whole theory of official life in the British and Indian services is *entirely* adverse to the conditions of scientific research and the mobility of research essential to the efficiency of laboratories. Urging the absolute necessity for bacteriological investigation as the *only* means of determining the origin, methods of diffusion and measures for the prevention of any local outbreaks of cholera, typhoid or epizymotic diseases of man and other animals, he finds fault with the present system of monopoly, and suggests that the persons to be appointed as superintendents of such laboratories should be *preferably* selected from civil life than from the Army Medical Services, which latter complain of already being over-worked and to remove any of them for bacteriological work, means to throw the weight of their legitimate work on to the already over-burdened shoulders of those remaining.

We do not quite understand the reason for the sudden and opposite change in MR. HART's tactics, but if he is sincere in what he now writes, we congratulate him on having discovered the truth, and heartily endorse his plea for the necessity of wholesale reform.

**"IS THE CODE OF PROFESSIONAL ETIQUETTE
BETWEEN MEDICAL MEN OF ANY
ADVANTAGE TO THE PUBLIC?"**

Science Gleanings has the following excellent answer to the question:—"Yes, it is certainly a very fortunate thing that the general body of medical men are agreed to hold themselves bound by an exceptionally strict code of business 'ethics,' for only in virtue of this fact is it that the science of physics becomes continually associated with new accounts

of the deaths and other losses that result from ill-considered surgery or dosage. But by an *original* proceeding in the world such defects (probably more patent to him than to others), as might develop themselves in a structure, for which he was responsible. If indeed, that sort of thing were done it might prove a vast benefit to engineering science; but in the meantime the individual would be ruined. On the other hand, in the medical world, professional men are mutually agreed that failures, which must be so very common to all, shall—excepting for the clinical lessons that they teach—be honorably ignored. Hence it is very seldom that these reports on cases, with which technical medical journals are filled, appear to be so warped and rose-colored as the uninitiated world expect. Truth prevails, simply because medical etiquette ensures that personal interests shall not be opposed to it. Thus medical science is improved, which is of the greatest advantage to the public."

LADY DOCTORS IN INDIA.

UNDER the *nom de plume* of "VIOLET," is published an interesting article, wherein a contemporary avers that while the lady doctor is a God-send in zenana practice (where a male physician would not be admitted), and has done and still does a great deal of "good," she is frequently subjected to supercilious and overbearing treatment from the husbands of her patients, as being a woman they seem to think she is not entitled to the respect or courtesy they would extend to a man. Again, when in charge of a dispensary in the pay of zemindars or a "company of native merchants" she is treated as a menial servant, and efforts are made to exact more than the pay entitles. Lastly, she complains that when a lady doctor is sent to take charge of a hospital in a station which already has a Civil Surgeon, the latter, instead of working harmoniously with her, interferes with and retards her duties. There are some exceptions, however.

SOME ADVERTISING TRICKS.

THE *British Medical Journal* takes exception to an advertising method which has lately been adopted by the National Orthopaedic Hospital, Great Portland Street, London, which has issued a pamphlet appealing for subscriptions and containing woodcuts illustrating the condition of patients before and after treatment in the hospital. The Bristol Hospital for sick children and women has offended similarly in issuing pictures of a little boy before and after an operation for talipes. It is satisfactory to find that these procedures have been adopted without the knowledge or consent of the medical staff of those institutions. The dignity of the profession or the feelings of its members appear to be not at all considered by hospital Secretaries and Committees in their endeavours and desires to further the interests of their institutions; and the result is the adoption of measures which tend to defeat the very objects they were intended to effect.

THE HEALTH OF CALCUTTA.

The small-pox scare continues though there is a distinct subsidence in the epidemic, the death-rate having fallen from 186 to 140. Cholera is still largely present, and a mild form of epidemic influenza as well as measles, afflicts the town. The heat is very trying, and it is reported that a number of cases of typhoid fever have broken out among the European population. The general death-rate is still exceedingly high. It is very probable that the whole question of the sanitation of Calcutta, which is causing much public agitation, will soon be thoroughly thrashed out by the Municipal Commissioners.

THE MEDICO-SURGICAL TREATMENT OF FACIAL BLEMISHES.

Evening such, the gentle sex may be charged with being really vain and keenly solicitous for the improvement of appearance, or for the upkeeps of their charms, there can be no doubt but that the falling is common to mankind in general. We think, therefore with Dr. E. H. SCHWARTZ of Kansas City, that it is surprising that the subject of removing facial blemishes and of improving the appearance of the skin of the face should remain more or less resigned by the profession to the makers and readers of proprietary remedies. While the aims of medicine have always been not only to relieve pain, but to remove or mitigate personal defects, it has allowed those anxious about their personal appearance and desirous of soft, smooth, velvety skins scarce any other alternative but that of resorting to dangerous ranges, useless cosmetics, &c., for the attainment of their object. We think that nothing will be found so remunerative in the profession than the study of facial dermatology and of the science and art of cosmetics.

A LEGAL VIEW OF PROFESSIONAL SECRECY.

COMMUNICATIONS made by a patient to his physician are in Indiana strictly by statute forbidden to be disclosed. A physician sued for failing to treat a hip-dislocation properly was accordingly prevented at the trial from referring to several matters relevant to the case, and which occurred at an examination of the case with a consultant; and damages to the extent of 1,500 dollars were allowed the patient. On an appeal being made, however, it was decided that communications made to a physician were forbidden to be disclosed except with the knowledge and consent of the patient, and that when the patient sued the physician for secrecy in regard to any circumstances connected with the case, and its treatment was no longer to be demanded of the physician. The physician's examinations and the consultation were all for the purpose of curing the patient, and it will be unfair to allow the patient to select what circumstances suited him only, and to thus limit the physician's testimony. All matters bearing on the case were therefore received in evidence.

ASSISTANT SURGEON JOHN A. KELLY, I. M. S.

WE deeply regret to announce the untimely death in London, from influenza, of Military Assistant Surgeon JOHN A. KELLY, L.R.C.P. & S., Edin., F.R.S. London. DR. KELLY was one of the most promising Eurasian graduates of the Madras University, of which he held the degree of L.M.S. He was the Hobart Prize man of his year, and was appointed lecturer in materia medica and chemistry in the Hyderabad Medical School. Subsequently he went to Edinburgh and obtained the diplomas of the Royal Colleges of Physicians and Surgeons of that city. After a few years of further practical work and study at Hyderabad, he recently went to England to graduate M.D. and F.R.C.S., and there can be no doubt that success would have crowned his efforts, for he was a man of sterling qualities and a linguist of no mean order, having passed the higher standard examination in Hindustani, Persian and Tamil.

REST AFTER SUDDEN GRIEF.

DR. LOUIS BAYSON urges that rest and temporary seclusion are absolutely necessary for the nervous system after blows caused by sorrow. To try and find relief in work, study or amusement, is useless and dangerous. Grief cannot be ignored nor can it be checked up; and rambles in the open air, sea-side solitude, quietest drives and the companionship of children have soothing influences. Seclusion, rest, sleep, appropriate food, fresh air, sunshine, interest that tax neither mind nor body, are the requirements in this class of illness. So reports the *N. Y. Medical Record*.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen and a lady who have joined the Association since our last issue:—

G. Ram Kristna, G.M.S., H. H. the Nizam's Service, Deodrug, Hyderabad, Deccan.
G. Srinivasa Ram, G.M.S., H. H. the Nizam's Service, Yakootpura Diary, Hyderabad, Deccan.
C. B. Narasinga Rao, G.M.S., Hosp. Asst., Kolar.
Miss Louise B. Smith, G.M.A., Cal., 37 Dharwad St., Calcutta.
W. F. O'Connor, Assistant Surgeon, I. M. S., Sudder Hospital, Amballa.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

QUININE IN CHOLERA.

DR. ERSKINE FULLERTON, of Ohio, puts his faith on the value of quinine in cholera; and so much is he convinced of the efficacy of the drug in this disease that he does not see why the mortality from this disease should not be reduced to 5 per cent. and under in the United States. We do not know why DR. FULLERTON expects such happy results from the treatment he advocates in the United States only. Perhaps DR. FULLERTON does not mean it to be inferred that he places any geographical limits to the efficacy of the quinine treatment. His plan is to give ten grains of quinine in a small quantity of water or in acid solution at intervals of one hour, until twenty to forty grains have been given: the same doses half-hourly in collapsed cases, and smaller doses at longer intervals in choleraic diarrhoea. The medicine is said to be rarely vomited, and the administration should be begun early. As however, many other advocated remedies are directed to be employed in conjunction with the quinine we cannot estimate its importance as a curative factor.

ENQUIRY INTO THE "PHANTOM KISS" CASE.

WE rejoice to find that the proceeding of the Madras Government condemning to social degradation and departmental ruin of Surgeon-Major F. CLARENCE SMITH is at last likely to be officially examined and considered. The Major has been placed in possession of the charges against him, and we may expect to be soon told whether or not the doctor's delinquency, which has so seriously roused the moral sensitiveness of the Madras Governor, is regarded by the highest tribunal of the empire as deserving of the extreme punishment most arbitrarily awarded. The WENLOCK administration has been a quinquennium of unpleasant notoriety in many respects, and the SMITH kissing case is one of these. On the motion of MR. CAINE, however, in the House of Commons, MR. FOWLER has given promise to carefully consider a lengthy memorial received from DR. SMITH, and we hope that ample justice will be done to DR. SMITH and to those who have subjected him to serious humiliation and grief.

HOW TO IMPROVE INDIAN VILLAGE SANITATION.

"X," writing to *The Englishman*, proposes the following means of improving village sanitation:—

"In such villages as are able to pay, and in which one or more families of the scavenging class are to be found, the people may be assessed a pie a head; the sum thus collected

being paid to a scavenging family of the village, which will in return be required to perform such small duties in aid of sanitation as may be imposed on them, under the immediate control of the panchayat or a responsible agent otherwise provided; or several such villages may be grouped into circles under local or district boards. The suggestion is well worth a trial, and has the merits of being both cheap and easy of application."

SHORT ITEMS.

The rule still holds that the widow of a medical man is entitled to much consideration and if need be, to gratuitous medical attendance from the profession. The rule is not an absolute one. It is subject to considerations of reason and circumstance, and should not be pressed too rigidly on either side; but subject to these qualifications, it is one to be respected.

It has been ruled by the General Medical Council of Great Britain that the term "skilled midwife competent to attend natural labor," when used in a certificate, is open to legal objection and is a contravention of the Medical Act. Will Indian hospitals granting such certificates to *dais* and midwives, please take note of their past transgressions?

When artificial respiration, friction and all the usual procedures failed to revive a newly-born infant from apparent death after delivery with forceps, M. Guet tried *rhythmical tractions on its tongue* for six minutes with such marvellous success, that he commends it to the notice of *accoucheurs* as being superior to all other methods for restoring life.

A large gall-stone weighing 250 grains, was removed by Dr. T. A. McGraw from the junction of the jejunum and ileum, where it completely filled the lumen of the intestine of a patient who was operated on for obstruction of the bowel.

The verdict of the Leprosy Commission, that leprosy is a non-contagious malady, is practically rejected, for the principle on which the Leper Act passed by the Bengal Legislative Council is based, is that leprosy is a contagious disease.

Efforts are being made by the Mukherjees of Uttarpara for the establishment of an Ayurvedic Institution in Calcutta to give regular and sound training in the Ayurvedic system of medicine. A hospital and garden are to be attached to it for the growth of medicinal plants.

The Sanitary Board at Hong-Kong have decided to discountenance any sanitary policy that contemplates sewage-drains from Chinese houses. The hand-system of sanitation is to be maintained and extended as in every way safer to public health.—*Indian Engineering*.

The *Morning Post* records a case of snake-bite in which the patient recovered by the prompt application of a ligature above the bitten part, and six leeches, which sucked the wound and died as they fell off.

The Calcutta Health Officer is being soundly rated by the Indian press for devoting his whole time to microscopic, editorial and congressional work, instead of looking after the scavenging of the city.

The threatened strike among the milkmen of Calcutta has commenced in the totally suburban area of the city, and unless the Municipal authorities relax the now rules for the regulation of cattle sheds, the strike promises to be general.

Dr. Panlery, Assistant Surgeon of the Calcutta General Hospital, has obtained three months' leave to assist Dr. Moosatha Nath Chatterji, Resident Physician of the Mayo Hospital, will officiate during his absence on leave.

Any case of epilepsy developing suddenly in a patient who has passed thirty-five years of age, and who gives no history of injury, Prof. Hare says, is almost invariably caused by syphilis.—*Practitioner*.

The headaches of pregnancy, if persistent, should always be regarded with suspicion. They too frequently give evidence of uræmia and threatening eclampsia.—*Glasgow Med. Jour.*

Twelve natives of Manicktollah, Calcutta, were prosecuted before the Deputy Magistrate of Sealdah for refusing to vaccinate their children, and were fined from Rs. 12 to Rs. 15 each.

The investigations of STRAUSS have conclusively shown, that the nasal cavities of healthy persons who frequent localities inhabited constantly by phthisical patients, can be, and often are, infected by virulent *tubercle bacilli*.

According to a new law passed by the New York bureau \$5,000 is the extreme amount that can be claimed as damages by the relatives of a person who is killed through the negligence or carelessness of another person or of a corporation.

Surgeon-Colonel D. F. Bateman, I. M. S., P. M. O., Mandalay and Chin Hills command, has been directed to proceed to Madras to join his new appointment.

Monghyr is to be supplied with drinking water from the hot spring in the adjacent village of Sitakund. The District Board are acquiring land for the purpose.

The Senate of the Glasgow University has conferred on Surgeon-Major L. A. Waddell, M.B., I. M. S., whose researches in Sikkim are so well-known, the Honorary Degree of LL.D.

Miss Lillian Hamilton, M.D., accompanies the Amir's son in her medical capacity. We wonder how this anomaly was permitted!

If you have a fatiguingly deaf patient to talk to, place the ear-pieces of your binaural stethoscope in the patient's ears, and talk into the chest piece, and you have an excellent ear-trumpet.

If you leave your spectacles at home, being old and apyopic, make a hole with a pin in the corner of your visiting card, and you can read your clinical thermometer or anything else.

Khan Sahib Amir Buksh, Hospital Assistant, Viceroy's Dispensary, has been selected to accompany the Amir's son home, as native doctor.

Four villagers have been sentenced to death for the murder of Dr. Ranjeet Sing, and ten others, who were also implicated, have been discharged by the Sessions Judge.

New dissection rooms are soon to displace the present disgraceful structures in the anatomical department of the Calcutta Medical College.

Surgeon Lieutenant-Colonel E. C. Duff, M.B., I. M. S., officiates as professor of materia medica, vice Professor McConnell, who goes on leave for six months.

Colonel Sir James Lindsay and Surgeon-Major George Scott Robertson, M.C., I. M. S., the British Resident, is safe but has been slightly wounded.

Dr. Salmon, of Cowbridge, has just attained his 108th year. He is the oldest Freemason in the world, and was a surgeon in the army of George III.

The degree of L. L. D. of the Aberdeen University has been conferred *honoris causa* on Surgeon Major-General Robert Harvey, M.D., F.R.C.P., D.S.O. of the Punjab Army.

Surgeon-Colonel W. F. Burnett, A. M. S., has been appointed P. M. O., Mandalay and Chin Hills command.

Christopher Heath, F.R.C.S., Eng., has been elected President of the Royal College of Surgeons of England.

Cholera of a virulent type has broken out in the Dum-Dum Cantonment. Several deaths have occurred.

Surgeon-Major Westcott has gone from Hong-Kong to Hainan to investigate the alleged existence of plague there.

Current Medical Literature.

MEDICINE.

The Signs of Heart Failure in Fever.

AFTER examining hearts of a great many patients who had died from varioloid and from typhoid fever, HAYEM noticed symptomatic myolitis, and attributing the alterations of the muscles to changes both in the blood, and the blood vessels stated that myocarditis was more marked in typhoid fever than in variola, and that in typhoid the changes in the heart are often limited to the arteries while the muscular fibres sometimes undergo vitreous degeneration. STREDEY fully endorses this view; but HUGHARD who studied these conditions with DESNOS declares that the fibres in myocarditis were much more deeply changed in variola than in typhoid and agrees with BERNHEIM that in typhoid the nervous element should be added to the myolitic, as the poison of typhoid acts on the heart like digitalis, and many of the symptoms attributed to myocarditis of typhoid fever must be referred to lesions of the cardiac nervous system or to the effect of functional disturbance, and injections of caffeine or of ergotine, and even cold baths should be employed in preference to digitalis when cardiac symptoms complicate typhoid. SAMPSON shews that, *la grippe*, much resembles typhoid as determining myocarditis, but causes other disturbances of cardiac innervation. HUGHARD, who points out that very great errors are often made in the diagnosis of acute myocarditis in fevers, especially typhoid, explains that while considerable myocardial lesions often appear in cardiac sclerosis, very grave symptoms of heart trouble were often accompanied by hardly any appreciable lesions of the muscular constituents of the heart. He furthermore insists that the signs of heart failure in fevers should not be limited exclusively to the determination of the weakening or the disappearance of the first sound, as besides this weakening there are two other symptoms: the embryocardiac and the broad diastolic, or prolongation of the cardiac diastole.

Is Simple Stricture of the Rectum in reality Syphilitic?

A white, pale, cachectic man, 45, complained of a swelling of the anal orifice which Dr. LAURENCE diagnosed as simple submucous stricture and opened by thermocautery. Patient progressed well till the 30th day, when a thin serous

discharge appeared, accompanied by sharp pains in the anorectal stricture, difficult defecation, tympanitic abdomen, general debility and loss of appetite. Further examination disclosing the presence of an ano-rectal gumma with stricture of the rectum, and the man confessing to a penile chancre and secondary syphilis in 1888, he was placed on specific treatment which brought about a rapid cure. M. FOURNIE, with whose views on this subject M. LADARRO fully concurs, contends that simple or fibrous rectal stricture is always syphilitic; and regarding this case as confirming his views, calls attention to other cases where with a rectal stricture, exist ano-rectal and ano-perineal lesions of a gummatous nature, and when these lesions are neglected, they may develop the regular anal fistula, which professor TRELAT described as syphilitic fistula.

Snake-bite treated by Injections of Strychnine.

DR. M. PERCIVAL, L.R.C.P., Irel., relates a case of snake-bite treated by strychnine hypodermic injections in the *Lancet* of 23rd March 1896. The man was brought to him four hours after he had been bitten; the appearances presented by him at first were extreme pallor, straggling gait, a cold perspiration all over the body, pupils widely dilated, pulse rapid, irregular, intermittent and barely perceptible, breathing in sighs, and giddiness. Marks of a bite were visible on the lip. The treatment consisted of two rapid injections of $\frac{1}{10}$ grain strychnine within 10 minutes, whereby the pulse improved markedly, a third injection was given, with the result that the intermittency ceased and the pulse came down to 96. Injections of $\frac{1}{10}$ grain were continued every 20 minutes, and pulse and breathing improved, the sweat vanished, but vertigo remained. He then had a relapse, but on further injections and assuming the recumbent posture, the patient rallied and was admitted into hospital. In the evening he vomited up a pint of coffee-ground colored fluid, but whether this is due to hæmorrhage from the mucosa of the stomach (a characteristic of snake-bite, as has been pointed out) or otherwise, is conjectural. He made a good recovery.

Amœbic Dysentery.

IMPURE drinking-water is saddled with the burden of this difficult-to-cure disease, which DR. H. A. WEST declares is much more common than is generally supposed, and produces a very rapid anæmia and wasting which may however, be retarded, if not actually controlled, by a liberal diet and the exhibition of salines, and large doses of bismuth and caloi. The symptoms are very uniform in acute cases, being very similar to those of catarrhal dysentery; but they soon become chronic, being characterized by irregularity (alternating between improvement and relapse) in the nature and frequency of the stools with a tendency to alteration of different parts of the large bowel and a disposition to infiltration and undermining of the intestinal mucous membrane to afford a nidus for the destructive work of the amœbæ which multiply rapidly, and though easily killed by immersion in solutions of quinine, are not affected by injections of the same solution. Cleanliness with antiseptic enemata of argentic nitrate (15 grains to the pint) are of great value in destroying the micro-organisms and stimulating the intestinal ulcers to heal.

Catarrhus.

As the various catarrhal diseases though named by the portions of the body attacked, seldom or never occur singly, and being constitutional in nature possess the same general characters, though somewhat modified in local detail, according to the part affected, FORWATER thinks that all these catarrhal affections should be unified under the term

"*phagocytosis*" especially in: (1) The acute febrile and ultimate conditions suffered them all. (2) They were mutually contagious, and the contagion must be due to a germ, the pathogenesis of which had been found in all of them and after cultivation was capable of setting up conditions closely resembling those of them. (3) Though predisposition was here less important than in tubercle, still some individuals inherited a peculiar tendency to fall victims to this disease as they did to tubercle.

Phosphoric Acid in the Urine of Malarial Fever.

In chronic malarial cachexia the elimination of phosphoric acid does not seem to be affected, but REM-FLOOT and REMINGTON find that it considerably increases during the first 24 hours of malarial infection, and that, independent of the amount of food taken, or the increased quantity of urine voided, there is a notable diminution in the amount of phosphoric acid eliminated as soon as the temperature rises above the normal. This decrease is not proportional to the degree or duration of the fever, but if the fever be cut short by quinine or subside of itself, phosphaturia is usually observed, and this remarkable "unloading" of phosphoric acid continuing for several hours, pulls up for the retention noticed during the febrile paroxysm.

Merycism.

ONLY fifty cases have been reported of merycism, which DR. W. A. HAMMOND defines as "rumination and remastication in the human subject" always due to rapid eating and overloading the oesophagus. Though he quite agreed with other observers that a distinction should be made between congenital and acquired merycism, he did not admit its being a neurosis. He advocates no special line of treatment, and is uncertain whether crania operations can influence or lead to cure; but submits that he has obtained very good results from trephining.

SURGERY.

The Treatment of Pott's Disease of the Spine.

AS no operation can cut short this disease, and as recovery is postponed by unfavorable mechanical environment, DR. A. B. JUDSON thinks that we can best assist nature to promote arrest of destruction and the beginning of repair by putting the affected vertebrae in their best attitude by, as far as practicable, removing injurious pressure, by applying the most effective kind of retentive splint that will not only prevent the affected joint from moving, but will also relieve the bone of the duty of supporting weight and concussion. To do this effectively judicious antero-posterior pressure is required, but as in the corset and braces, the leverage necessary for the proper support is deficient, DR. JUDSON advocates the use of parallel steel uprights joined by a pelvic band and free at their upper ends which curve over the top of the shoulders and are kept in position by straps, which also exert a counter-pressure from before backwards to meet the pressure from behind forwards urged by the impinging of the steels on pads attached to the uprights at the level of the spinal projection and applied a short distance from the median line by each side.

The Bicycle as an etiological factor in lesions of the perineal region.

FABRIZIO TRENDRENO ROVERO and DE PEZZER contribute remarks on the evils personal to certain persons with tubular limbs wide apart. They are all agreed that bicycling produces hardness and rigidity of the perineum, labia, &c., causing pain, frequent urination and even a discharge per vaginam. The veins become varicose, producing hæmorrhoids, which pressure on the nerves produces numbness. In three instances

perineal abscess, uterine fibroids, and cysts, respectively, occurred. Then again the distressing hæmorrhoids and hæmipia produced by riding over uneven ground are a fruitful source of bladder irritability, cystitis, &c.

FABRIZIO recommends improved pneumatic saddles and insists on a more upright position while riding over rough and uneven roads, coupled with greater care and less speed.—*Practitioner.*

Abdominal Surgery on the Battle-field.

THAT laparotomy in dangerous internal hæmorrhage and visceral wounds of the abdomen is perfectly justifiable in military practice, is shown by SHAW, who suggests that permanent hæmostasis must be secured by ligatures or aseptic tamponade; but as soon as a man is wounded, he should be carried to the rear and temporary hæmostasis established by compression over the injured part and auto-transfusion by insular constriction at the base of one or more extremities while arterial bleeding may be arrested by digital pressure on the aorta below the diaphragm and venous or parenchymatous by sponge compression. Visceral wounds of liver or pancreas yield to suturing, aseptic tamponade or actual cautery, and those of the spleen or kidney sometimes require extirpation of the injured organ; but as with a very few exceptions, wounds of the stomach and intestines usually result in death if they are large enough to permit extravasation, they should be quickly and safely closed by a row of sero-muscular sutures, including a few fibres of the submucous and fibrous coats and the after-treatment directed to combat shock and prevent complications.

Ligature of Spermatic Cord in Hypertrophy of the Prostate Gland.

THE most rational way of treating prostatic hypertrophy, thinks EWING MEARS, is to obliterate sexual function and produce atrophy by castration; but as very few patients would consent to mutilation, ligature of the vas deferens was suggested as replacing castration and for gradually extinguishing the sexual function without disturbing the mental condition of the patient, as might be the case were the testes removed and terminating the horrible sufferings from the results of prostatic obstruction.

Operative Treatment of Wry Neck.

MIKULICZ advocates almost total removal of the contracted muscle, leaving only that part where it is traversed by the spinal accessory nerve, as he concludes that wry neck is a myositis fibrosa, the result of a chronic inflammation involving the whole of the sterno-mastoid, while the sterno-mastoid-hæmatoma sometimes seen in infants is due, not to effusion of blood, but to thickening and induration of the inflamed muscle.

Nephrectomy for Sarcoma of Kidney, in a Child twenty-five months old.

HAVING diagnosed malignant disease of the left kidney in a child of 25 months, DR. X. O. WENZEL performed nephrectomy, removing a fairly large rhabdomyo-sarcoma originating from the kidney. The child stood the operation wonderfully well, losing but little blood, and spontaneously urinating about two hours afterwards. She was dismissed from observation 15 days after the operation, and has since gained considerable flesh.

Incision of Pericardium for Pericarditis.

Pericarditis.

IN October 1893, a boy of 11 received a punctured wound in his cardiac region. This gave no pain and healed without medication; but after three months from diagnosis, cyanosis on both and cardiac failure, and at that time severe, Von Treussner punctured the pericardium with a fine

was removed, and a line of abscess laid, after which the wound was closed. A few days later, the patient was again taken up, and on tapping (4 times more) opened only tenacious solid, and there were symptoms of pleuro-pneumonia. It was resolved to open the pericardium freely, and after a litre of purulent fluid mixed with many large clots of fibrin were let out, the cavity was washed out with salicylic acid, and two drainage tubes inserted. Marked improvement taking place, the wound completely healed in 21 days.

OBSTETRICS AND GYNECOLOGY.

Urethro-Vaginal Abscesses.

THAT the usual symptoms show themselves, the patients seem usually in good health, although the pre-disposing causes may, as Dr. T. S. CULLUM points out, exist long before the physical manifestation in the urethro-vaginal septum of fluctuant tender tumours which varying from the size of a marble to that of a hen's egg, appear inside the vagina, but just behind the external orifice of the urethra. Oction may be painful, any sort of pressure will cause the tumor to discharge its contents through the urethra, as the sac-cavity can be entered by passing a catheter with its point downwards along the urethral floor. The treatment consists in carefully excising the sac and closing the opening with silk sutures, while among the possible causes of this condition are: congenital cysts, urethral diverticulum formed by a weak point in the urethral wall or by an arrested calculus, dilatation of SKENE'S tubules or of a lacuna of Morgagni, an abrasion of the mucous membrane creating a small pocket in which the decomposing urine sets up inflammatory processes or a suppurating cyst located in the urethro-vaginal septum bursting into the urethra. These sac-like dilatations in the urethral floor should not be confounded with cysts of GARTNER'S duct which being usually about the size of a pea, do not communicate with the urethra.

Treatment of Displacements by Pessary.

DR. DAVENPORT says:—

In cases of uncomplicated retroversion or retroflexion of the uterus the choice of treatment lies between shortening the round ligaments and the wearing of a pessary. A cure, either anatomical and symptomatic, or symptomatic alone, may be confidently expected from the use of a pessary in about 25 per cent. of all cases. Where a cure is effected, it is usually within a year or a year-and-a-half after the beginning of treatment. A large proportion of those not cured can wear a pessary without discomfort and do not wish an operation.

The operation for shortening the round ligaments should be limited to those cases where a pessary cannot be worn, to those who prefer it to wearing a support for years, to cases where vaginal treatment is inappropriate, and as supplementary to other operations.—*Amer. Jour. of Obstetrics.*

Menstruation in a Child.

G. E. BART showed at the Kiess Obstetrical and Gynaecological Society a girl, aged 6, who had commenced to menstruate regularly about twelve months previously. The catamenia recurred every three or four weeks, and lasted on each occasion from four to ten days. The breasts, external genitalia, and pubic hair growth resembled those of a girl 13 or 14 years old. The abdomen proved to be considerably enlarged, the circumference amounting to 35 centimetres. The examination revealed the presence of a fluctuating thick-walled ovarian cyst.—*B. M. J.*

A new method of producing premature labor.

Labour.

REYNOLDS gives a new method of producing premature labour, by means of an instrument which is described

as follows:—The instrument is composed of an introduction tube of some grammes weight, having the extremities flat, the end drawn out and shaped into a fine needle. This portion is intended to be introduced into the cervix. The introduction is curved and has a ring six centimetres from the end, which gives the measure of its introduction into the cervical canal. When this touches the os extensor, the tube is forced into the uterine cavity. In this conducting tube is placed a capillary tube with an ovoid ampulla at its extremity. This end very dilatible. To use the instrument, the entire tube is coated with vaseline and is placed inside the vulva passing a little beyond the flange-like end. The instrument is guided by the left hand into the vagina and the ampulla and into the cervical canal until the ring rests against the external os. The rubber tube is then injected, and as it fills, the ovoid end protrudes and gradually makes its way upward to the internal os. The metal tube is then withdrawn, the rubber balloon being left in place. He claims an infantile mortality of only 6 per cent. with absence of complications on the part of the mother. No change in fetal presentations has been observed.—*Amer. Jour. of Med. Sci.*

Abdominal Palpation of Obese Women.

DR. HARRIS SLOCUM has found a narrow zone on the abdominal walls where the fat in the muscular layer is deposited to a less extent than at other points. He describes this as a depressed curved line running from one anterior spine to the other, with its convexity toward the mœs venter. Along and near this line little fat is lodged. By depressing the finger tips the pelvic organs may be felt, the fat about the navel and below the zone being pushed out of the way by the pressure of the hand. In this way, he says, an effective palpation may be obtained even in the most obese. He has had satisfactory experience with it, personally, beyond that which had formerly been possible by palpation over the abdomen at large. The method cannot be carried out when there is much gaseous distension of the intestines, or when the dress is tight.—*Philadelphia Polyclinic.*

Extra-uterine Pregnancy; Elimination of the Fœtus per Rectum.

DR. SPANNOCHI reports the following case of extra-uterine pregnancy, remarkable for the mode of its termination. A robust woman, without a trace of disease of any kind, four months after a perfectly healthy labor, began to complain of pains in the hypogastrium. The symptoms pointed to an extra-uterine pregnancy, probably in the left Fallopian tube. A month later the sac ruptured, and the fœtus was discharged into the abdominal cavity. Reactive peritonitis around the foreign body came on; then followed suppuration and perforation of the intestine with discharge of pus. Owing to the continuous contractions caused by the presence of the foreign body, the intestine became dilated and prolapsed: finally, after twenty-eight days, the fœtus came away through the anus. After a considerable time complete recovery took place.—*Med. World.*

Cold Bathing during Menstruation.

Cold bathing during menstruation is a beneficial measure, provided women accustom themselves to the treatment by bathing every day for at least eight days before the arrival of the period, when they can continue during the menstrual flow without any danger. In the case of a very anæmic girl in whom this treatment was instituted, it gave most satisfactory results. However, before the recent Gynæcological Congress, held that cold salt-water baths facilitate the menstruation flow, the influence of genital life and thereby increase fecundity in remarkable manner.—*Dr. CURETTE in Gazette de Gynécologie.*

Correcting the Errors in Detained Placenta.

Out of 1,000 cases, representing 66 cases of correcting for retained placenta after abortion, all of whom recovered, points out that certain errors applied to the curette are not altogether rare, e.g., it has been termed "blind," "unstable" and "dangerous." This latter condition he considers to be especially true, as a careless operator may easily penetrate right through the uterine walls. These objections can, however, apply equally as well to any surgical instrument unskillfully handled. If the finger is used to explore the uterine cavity thoroughly, the curette is not a dangerous instrument. Such exploration, coupled with a fairly dilated cervix, are two conditions essential to ensure safety and efficiency in using the curette. Chloroform is unnecessary, a cutting, and not a blunt, curette should be used. Swabbing with creosoted glycerine, or iodoine, intra-uterine injections and plugging the vagina with iodoform gauze, constitute the *coup de grace* whenever the curette is employed.—*British Med. Journ.*

Should Antiseptic Vaginal Douching be made a routine practice during the Puerperium?

ANTISEPTIC vaginal douches have been more or less in vogue since 1848, but they were most popular between 1875 and 1885, and at one time it appeared that they would be universally adopted as routine prophylactic measures. FORDYCE BAKER (1854) was the first to use these injections in America, and in 1876 TARNIER recommended bichloride of mercury as an antiseptic intra-vaginal injection; but two years after, F. BAKER gave up the practice of vaginal douches. GALLARD THOMAS became its most enthusiastic champion, and in 1884 rushed the douching wave to its greatest height. Since then, however, it has gradually ebbed, and though opinion is much divided and some still answer "yes" to the question, "should antiseptic vaginal douching be made a routine practice in the puerperium?" DR. ADAM H. WRIGHT boldly replies with an emphatic "NO," because (1) it disturbs that perfect rest and quiet that are essential for a patient after labor; (2) the utero-vaginal canal being bruised, wounded and lacerated after labor, douching is unscientific on surgical grounds which demand rest, pressure, position and drainage, all of which are disturbed by vaginal injections and suppositories; (3) the normal vaginal mucus, which is strongly acid, restrains or destroys the pathogenic cocci. Vaginal antiseptic douches, instead of lessening the dangers accruing from the presence of bacteria in the vagina, may augment them by interfering with the normal acidity and thus chemically lessening the resistance of the tissues to pathogenic germs; (4) as supported by scores of instances, douching is actually dangerous. It disturbs clots, opening up avenues for infection, opens lacerations of the cervix and vagina, preventing them from healing, and has been known to cause septic endometritis by washing bacteria into the uterine cavity.

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.**Syphilis in Tuberculosis.**

QUIDORE insists that syphilis infection preparing a soil well-suited to the entrance and huge development of tubercle bacilli, especially predisposed to pulmonary tuberculosis. He finds also that, after the appearance of the tubercles for which it has prepared the way, syphilis either decreases in virulence or becomes latent.

The Calibre of the Human Intestine.

Based on his opinion on experiments made with M. CHAPT's anatomical balloon, and on previous measurements of the human intestine, M. CHAPT declares that the 17 millimetre button used in America is much too large for the shaft, not in general, and especially for the lower end of the shaft of the French subject, whose bowel is about equal to the 17 millimetre button. Now as French cooking is the best in the world, the question arises whether dainty dishes are a physiological mistake, and whether a partial arrest of development with a diminished calibre of intestine is a natural consequence of "making digestion" by means of elaborate cookery?

To preserve organised Sediments in the Urine.

BOHLAND lets the urine stand till the deposit fairly collects. When pouring off the supernatant liquid, he washes the deposit with saline solutions and transfers it to MULLER'S fluid (changing every 3 or 4 days) where it is kept for a fortnight, after which the MULLER'S fluid is carefully drained off and the hardening completed in absolute alcohol. By this means, and after staining with ERLICH'S neutrophil mixture, epithelium, leucocytes and casts were readily recognised; but SEVATOR complains that while plenty of mono-nucleated leucocytes were found in parenchymatous and interstitial nephritis, very few polynucleated cells were seen.

The Blood in Melancholia.

EXAMINATION of the blood of 12 melancholics demonstrated that in the acute or chronic stage of the malady the red blood cells were markedly diminished in number, and were at the same time curved; the haemoglobin was also reduced in like proportion. Although melancholia is not caused by blood-poverty, it is certainly associated with it, and a course of iron alone or with quinine and strychnine, as it improves the quality of the blood, produces also a coincident improvement of the melancholia, as well as of the general health.—*Omaha Clinic.*

Cause of Death and changes in the Organs after Scalding.

MARKUSFELD and STEINHAUS experimented on rabbits in order to ascertain and determine the cause of death from scalds. The ears of the rabbits were placed in water heated to a very high temperature, which caused their death whenever it rose to 56° to 66°C. The following changes occurred in the blood:—Globules were found, (separated globular processes from the red blood cells) also microcytes, poikilocytes, broken-down red cells and various thrombi in the veins and arteries of the kidneys, liver, lungs, cardiac muscle, brain and spinal cord. These thrombi were composed of blood plates which sometimes filled up the entire lumen of the vessel, and at others only a portion; the remainder containing red corpuscles and hyaline matter. During the experiments, the temperature of the rabbits rose considerably. The same changes occurred in the blood vessels by the pouring of very cold water over the animals.

The main vessels of the ears were also ligatured (it being impossible to ligature the ordinary arterial vessels, owing to capillary anastomosis). By doing so only a small amount of blood reaches the general circulation. The phenomena now observed were that in spite of the rise of temperature of the water (in which the ears were immersed) to 70° or 83°C, death did not ensue during the experiment. The blood changes appeared much later, and thrombi were very rarely seen. The authors conclude that, as a result of the great heat on the blood, chemical and morphological changes are produced

to it which give rise to "blood-plate thrombosis" in the brain and spinal cord (among other organs) which cause death.

Primitive Man.

CONSIDERING him from a geological point of view, primitive man appears very late in the history of the building of the crust of the earth, so late indeed, that the date of the human period must be referred to the rocks now in process of formation. One of the very few data at our command whereby we can locate primitive man beyond our present association is that coeval with him, many animals existed which are now extinct.

The form and size of the cranial development of ancient man, when compared with those occurring in certain species of our own race at the present day, afford a clue to the mental capabilities of the inhabitants of Europe in those early days. Some of these skulls found are smaller than those of the lowest savages of the present day, while others shew a much higher brain capacity.

It is strange that among the relics of the age immediately preceding the last great glacial period, no trace of man is found, and those who hold the developmental theory cannot possibly suppose that man was introduced on to the earth in that high stage of evolution in which we first find his remains. The search must be made considerably *earlier* if primeval man is to be discovered, *viz.*, in the more temperate strata, which were forming during the glacial period. Northern Europe being quite uninhabitable during this period. The ice and snow in many instances covered the highest mountains and overtopped them for 200 to 300 feet, filling up the North Sea entirely, and forming a vast ice connection between the British Isles, Scandinavia, Germany and France eastward, and stretching far out into the Atlantic westward. This state of things after lasting for thousands of years, gradually gave way under the sun's rays, until the genial, temperate climate, we now enjoy, supervened.—*Guillard's Med. Jour.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Albuminuria and Life Insurance.

THOUGH the presence of large amounts of albumin in the urine of a candidate for insurance calls for immediate rejection, still the *temporary* (*i.e.* occasional or intermittent) appearance of this substance *lessens*, if it does not remove, the presumption of renal disease as many *transitory* causes, such as lithæmia, oxaluria, over-generous flesh diet, exposure, &c., may produce temporary or transient albuminuria *without discoverable evidence* of organic disease, yet as behind the temporary exciting cause, there may be just a wee touch of cirrhosis or of Bright's disease in an incipient condition, which at that time shewing no appreciable symptoms, nevertheless pursues its murderous course to the bitter end. DR. J. N. DANWORTH points out that it is the duty of the examiner to the candidate as well as to the company he represents, to *patiently ascertain* the *actual* condition of the applicant, who may safely be insured if the albumen be present occasionally only and in barely perceptible quantity; but he must be rejected at once if *traces* of renal disease are found. The indications for rejection are: (a) cardio-vascular tension, (b) *occipital* headache with vertigo, (c) listless movements, tongue coated, lips pale, breath foul, and cadaverous or waxy look of the skin, (d) tube casts known also as hyaline casts, which are *invariably* present when a true organic lesion exists.

Nomenclature for the different classes of Infectious Diseases.

VAGUE terms and ambiguous quotations by medical men as to the precise nomenclature and proper differentiation of the classes of epidemic disease, being the most potent generator of vague fear, which is the mother of panic, Dr. W. H. THOMSON banishes the nightmare of misnomer and deadly diffusible gas that for generations past weighed upon the minds of medical men and laity, whenever epidemic diseases were thought of. He therefore concludes—rightly too—that a great many of these needless scares may be averted by the adoption of a *definite* nomenclature that, describing the various classes of infectious disease, not only indicates the specific micro-organisms associated with, or being the starting point of each of them, but also lays down the measures of disinfection applicable to their *certain* prevention. He divides infectious diseases into three classes:—(1) The *communicable*, whose origin is from an animal body, and which are again divided into the (a) *contagious* such as diphtheria, small-pox, measles, mumps, scarlet fever, &c., where simple proximity to the sick is sufficient to convey the infection to those susceptible to it, and isolation of the sick is essential to prevent infection; and (b) *non-contagious*, such as cholera, typhoid and tuberculosis, where isolation of the sick is neither needful nor effective, and where infection is not by simple proximity but through intermediate means of communication. (2). The *non-communicable*, whose origin is from a place or thing (marsh-land or protozoan, for instance) and *not* from an animal body. Such are ague, yellow fever and the generality of miasmatic affections. (3). The *septic*, such as hydrophobia, leprosy, erysipelas, syphilis, tetanus, &c., where infection has gained access by inflammation or a wound or damage otherwise to the skin or the mucous membrane.

Bicycling for Women.

THE above subject, from the stand point of the gynecologist, is touched upon in the *American Journal of Obstetrics* by DR. R. L. DICKINSON, who, after recounting the advantages but greater disadvantages of the gymnasium, dancing, riding and the sewing machine, gives to bicycle-riding the first place of importance as affording the best means of providing an all-round form of exercise. The effect on the circulation is the same as that of any *general* exercise, *plus* a specialized supply of blood to the leg muscles, and an increased rapidity of circulation in the pelvis, whereby the pelvic vessels, muscles, and in fact the whole pelvic floor are stimulated and rendered more active through the heightened tonicity. The author illustrates his article with frozen sections, one of which demonstrates the extreme varicosity of the valve-less pelvic veins, ensuing from strain during waist-constriction. From these he deduces the propriety of assuming an upright position in riding, and the setting aside of all stiff seats in the stays, &c. Eight cases are cited as having benefited from bicycle exercise, which must, of course, be graduated to the power of each individual.

Poisoning by Drugs.

BINZ speaks of poisoning by drugs administered by the rectum. He refers to cases of poisoning by corrosive sublimate, opium and chloral, morphine, chloral, carbolic acid, and atropine. The sublimate and carbolic acid were both used as vermifuges. In all the cases the dose of the agent employed was large. The medico-legal aspect of such cases is obvious. The vagina probably absorbs less readily than the rectum, yet cases of poisoning have also been recorded here. Recently it has been shown that potassium iodide, iodoforn, salicylic acid, salol, and antipyrin are absorbed from

the vagina, and then during pregnancy, the puerperium, and later, this power of absorption is increased. Agents administered per vagina or per os should, of course, be classed as internal remedies, and not as external ones. The same caution is used in injections into the bladder or uterus.

—B. M. J.

THERAPEUTICS AND PHARMACOLOGY. *Aseptic counter-irritation in the treatment of affections of the Urinary Organs.*

In obstinate cases, where subacute inflammation of the urinary organs has resisted most forms of treatment, MR. E. HENRY FENWICK, F.R.C.S., recommends incision over the viscous and free tearing down of the neighbouring cellular tissue with a carefully asepticised finger with drainage of the wound for a week as the most effectual mode of inducing cure and repair by exciting suppuration of a benign type in the cellular tissue of their immediate neighbourhood and by draining off the products of inflammation; but he cautions the surgeon to exercise extreme care and perfect asepsis during the operation, and to particularly guard against breaking into carcinomatous or tubercular deposits, and letting their contents leak into or spread over the area that has been laid open merely for drainage.

Creasote and the Tubercle Bacillus.

As the results of experiments from tuberculous sputum supplied by DR. ARNOLD CHAPLIN, and from close observations on the methods employed in treating consumptives with creasote, DR. W. KINGTON FYFFE concludes that though nothing can be done with an advanced case of phthisis, still if taken in the early stages, it is possible to prolong life, if not to cure, and here creasote steps in by stopping ventral fermentation, improving digestion and aiding in the assimilation of food and exerting a definitely restraining effect on the poison of phthisis. He notes however, (1) that when creasote is inhaled, the virulence of the disease is not affected. (2) When creasote was administered by mouth in doses ranging from 2 to 12 minims, three times a day, there was a diminution of the virulence, and this diminution became more extremely marked in proportion as the doses were increased. (3) Exposure to creasote fumes in a small sealed chamber of 700 to 800 cubic feet capacity probably gives similar results to the above but the cases operated on were too few to draw definite conclusions from. (4) Provided the disease had not gone too far, creasote injected under the skin had a markedly restraining effect on the tubercle bacilli, but there is danger of setting up cellulitis by the irritation of the creasote. (5) Repeated, but every time unsuccessful attempts were made to cultivate tubercle bacilli in serum from animals inoculated with tuberculous sputum obtained from patients using large doses of creasote, either by the mouth or by the creasote chamber.

Asefotida for Insomnia.

ASEFOTIDA is a valuable remedy in the insomnia occurring in the aged. A five-grain pill exhibited after supper and repeated at bed-time will often bring refreshing sleep. In mild delirium, and especially during the period of unrest that precedes an attack of delirium tremens, the injection, by the rectum, of two ounces of the mixture of asefotida will, in many cases, procure the much-needed sleep, without recourse to the more dangerous narcotics.—*Louisville Med. Monthly.*

Antiseptic Remedies in Skin Diseases.

ANTISEPTICS in the treatment of skin diseases differ in a great many respects from surgical antiseptics. A healing by

first intention, of most lesions is easily accomplished; certainly not if the corium has been destroyed; but even if it is only impaired, denuded of the epidermis, or if bullae have been formed, the process of separation may easily be accomplished by catarrhal (epithelial) suppuration, the product of which is the "dry scab" under which healing takes place easily and undisturbed. This is nature's own antiseptic routine, which we should try to imitate, as far as possible, by using remedies which, although inert as it were, are capable of absorbing moisture and forming a coating that furnishes protection against air and against infection from the outside. In this sense these remedies are better antiseptics than those which have earned their reputation in the realm of surgery as being destroyers or antagonists of micro-organisms.—DR. F. J. LISSEUR in *N. Y. Med. Rec.*

Treatment of High Arterial Pressure.

As in many cases of high arterial tension, the spasm of the vessels and the signs of cardiac exhaustion and dilatation are due more to hyper-excitability of the vasomotor system than to direct pathological change in the walls of the blood vessel, it is advisable to remove the pressure and give the heart rest and quiet by nervous sedatives which, if not direct cardiac depressants, certainly act as sedatives to this organ, and may be given with or without the use of nitro-glycerine, the use of which (latter) though indicated by the condition of arterial tension, is contra-indicated by reason of the headache which it produces in susceptible persons.

Turpentine in Hæmorrhage.

DR. SASSE states that he has obtained excellent results from the use of oil of turpentine in the treatment of certain kinds of hæmorrhage, and thinks it should be more frequently employed for this purpose than it actually is. In the incoercible hæmorrhage, for instance, which sometimes supervenes after the extraction of a tooth in a "bleeder," there is said to be no better treatment than plugging the socket with cotton steeped in oil of turpentine. DR. SASSE has seen one case in which this immediately stopped a very abundant hæmorrhage consequent upon the extraction of a tooth. After several other measures, including plugging with iodoform gauze, had failed to produce the desired effect.

In hæmorrhage from the mouth, in scorbutic patients, he has successfully had recourse to pencilling the gums every hour with pure rectified oil of turpentine; small doses of this remedy were also administered internally.

Lastly in a case of vesical hæmorrhage which had proved refractory to all other hæmostatic measures, the bleeding was completely arrested by the use of a mixture containing 1 per cent. of oil of turpentine, a tablespoonful of which was given every hour.—*American Druggist.*

Rickets.

| | | |
|---------------|-----|-------------|
| R. Phosphorus | ... | gr. ʒ. |
| Saccharin | ... | gr. lxxvij. |
| Essence lemon | ... | m℥j. |
| Cod-liver oil | ... | ʒiiss. |

Dose 5j.

—GUINON.

Psoriasis of Scalp.

| | | |
|---------------------|-----|-------|
| R. Hydrag. ammoniat | ... | ʒi. |
| Sapo. molles | ... | ʒiij. |
| Vaseline | ... | ʒi. |

—FRIEDL.

Chronic Eczema of the Face.

HERRA recommends the following formula:—Aq. salicyl. 5-9; ichthyol. 10-9; glycerin. 30-9; spirit. menth. piparit. 30-0; spirit. lavandul. 30-0; spirit. vin. rectif. 60-0. Apply to the affected parts with a brush, several times a day.—*P. N. J.*

Correspondence.

MR. HART'S UTTERANCES ON INDIAN MEDICAL MATTERS.

To THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In his address on the last day of the Indian Medical Congress, DR. ERNEST HART said that "a second obstacle to the successful cultivation of medical research in India is the overloading of medical officers with clerical works of the most menial character, and which might be very well, and much more economically done by a less highly paid and less valuable officer." This remark of DR. HART's was not certainly meant for the medical officers in subordinate service, but to be true, it is more applicable to this latter class than to the members of the superior class, almost all of whom are provided with clerks, who, though not less highly paid than most of the subordinate medical officers, are certainly less valuable than they in the sense in which DR. HART applies the term civil medical subordinates in charge of sub-divisions, are at present nothing but so many jail clerks. As medical officers in charge of sub-divisions, they are and should naturally enough be considered as health officers of their respective sub-divisions, but Government does not avail itself, of their services in this way. The whole of their time is now being devoted to the executive works of sub-jails, which of late have become so numerous, as to require the hands of a separate clerk to perform their duties satisfactorily. A man with these and other executive duties to perform, can hardly be expected to do justice to his legitimate work. Strange to say the Inspector-General of Civil Hospitals, who objected to these officers being employed as Honorary Magistrates and Chairmen of Local Boards, &c., did not object to their being employed as clerks!

Medical subordinates in charge of sub-jails are called "Deputy Superintendents," a name by which one would understand that they are mere assistants of superintendents, while in reality they have to perform duties from those of superintendents down to those of a menial clerk and jailor, and consequently they are required to master the whole code of jail rules and regulations, and keep themselves acquainted with the voluminous circulars published every year. The sub-divisional officers who are styled "Superintendents of sub-jails," are only so in name, for their other duties leave them no time to look after the jail works, nor do they consider themselves responsible officers for the proper performance of these jail duties; neither does the Inspector-General of jails hold them as such. It is the Deputy Superintendents alone who are the sole responsible officers of sub-jails, though they could very well share their responsibilities with the Superintendents; for they cannot act independently, which mars the usefulness of this system of arrangement in not a slight degree. It is therefore necessary that the sub-jails should be managed by an officer entirely entrusted with the jail duties, even though there be honorary Superintendents; the sub-divisional officer exercising only a general control. The allowance now given to the Deputy Superintendents might be well spent in creating a new post for sub-jails styled "an assistant" or "sub jailor." Otherwise, as things

are at present, the energy and capacity of a professionally trained man of doing immense good to the public is thus lost and exhausted in preparing the jail returns and accounts, while he does his work with a grudging heart in the bargain. How glad would an Assistant Surgeon or a Civil Hospital Assistant be to devote even a fraction of his time (now spent in these clerical duties) to thinking over a surgical operation in order to perform it neatly and successfully, or to diagnose a case correctly? How much gladder would he be to try to ward off the visitation of an epidemic disease to his sub-division than pore over the Inspector-General of jails' *takud*, or to submit a correct manufacturing return! It is true that ill and under-paid as these medical subordinates are, most of them do not express their discontent for fear of losing their allowance, paltry though it be, nevertheless it is too true that every one of them bemoans his fate for being employed at a jail clerk for which he was never trained, nor intended. I do not know what saving Government effects by this arrangement of employing qualified men as clerks. I rather think they incur a great loss on the whole. This, it seems to me, is a penny wise and pound foolish policy. Are not Civil Assistant Surgeons prepared to work as Honorary Superintendents of sub-jails like sub-divisional officers if they have sufficient time at their disposal after performing their legitimate duties as medical officers? Cannot they take the whole responsibility of the management of a sub-jail in their own hands, if they are only freed from its clerical duties? I believe they can, and I venture to think that they would work *honorarily* with a cheerful spirit of independence.

Were a clerk or sub-jailor added to the jail establishments, from the allowance given to Deputy Superintendents, these officers, being thus freed from their clerical duties, could be employed by Government for inspecting the branch dispensaries of their respective sub-divisions, and it would do away, to a certain extent, with the necessity of maintaining a separate sanitary staff as proposed by the Indian Medical Congress. These officers in co-operation with the Local Boards and village unions can do any amount of sanitary work in addition to their other duties as medical officers in charge of sub-divisions.

Yours, &c., PURNA CHANDRA DASS GUPTA,
Assistant Surgeon, Kishoreganj.

KISHOREGANJ, 13th March 1895.

THE DANGERS OF PRIVATE PRACTICE.

To THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The Nattore extortion case has created great alarm in the mind of a certain medical man. I see, a poor doctor can be easily insulted and oppressed by any man, and at any time, especially if the former does not happen to be on good terms with the latter. This is so for two reasons, viz., (1) nature of the doctor's duty, and (2) his low social status. The insult being facilitated by the medical man attending his patient *alone*.

Had the social status of private medical practitioners been higher, such insults would, to a large extent, disappear. The highest fee of the best doctor in town seldom exceeds one gold mohur, while that of the best lawyer, usually exceeds ten gold mohurs. The highest

salary of a Deputy Magistrate is Rs. 800, but the most an Assistant Surgeon draws is Rs. 200 only! But two rupees are required to insult an Assistant Surgeon, who will not venture to go to court, both for want of evidence and want of funds.

Dr. GANGA GOVINDA SARKAR was most shamefully insulted and oppressed by MATHURA NATH PAL, whose conviction of six months' rigorous imprisonment was confirmed by the High Court. This is surely some consolation to Dr. GANGA GOVINDA SARKAR and to the general public. As regards RAJA JOGENDRA NATH ROY, their lordships were of opinion that there could be little moral doubt that he was privy to the transaction, but there was not sufficient legal evidence to shew that he aided and abetted it. I am really sorry for this want of legal evidence on Dr. SARKAR's side. For a poor man to secure sufficient legal evidence on which to convict a big zemindar, is not always possible or easy.

A doctor, who has ever had the misfortune of being a family attendant to a wicked zemindar, knows how fretful, whimsical, aristocratic and oppressive some of them are! They arrogate to themselves the rights and dues of veritable Kings and potentates, and are always styled "Rajas," and "Maharajas" by their subjects, who, while they cry out against the so-called oppression of the Government, are silent to and bear stoically (if not otherwise) the far greater oppression and usurpation of their own zemindars!

The Nattore case is not an isolated instance of a doctor's insult at the hands of a zemindar. I myself was once insulted with my family, by Babu RAM GOPAL ROY CHOWDHARI, the zemindar of Mohadeipur in Dinajpur. One night I was called to have a *tete a tete* with RAM GOPAL Babu, as was our usual custom, I being his family doctor; on that day, however, I declined the honor as I was indisposed. This omission on my part so much exasperated the zemindar, that on the following morning he himself with many of his *conferees*, came and occupied the house adjoining mine, purposely to insult me and my family. The respectable residents of the village took my side, and legal proceedings were instituted against RAM GOPAL Babu with the result that he was bound down by a bond of Rs. 1,000 and two securities of Rs. 500 each to keep the peace for one year. This was in April 1893. In 1894 he was again fined and bound down to keep the peace for another year! On account of his oppression, almost all the respectable residents of the village left the place, and I shall never forget those scenes of oppression by RAM GOPAL Babu, who decimated a whole village to a desert. I give below his own letter of apology, in order to convince the public that zemindars do insult doctors.

"MOHADEUPUR,

No. 555. The 31st January 1893.

TO BABU HARA KALI SEN,

Hospital Assistant, Mohadeipur Dispensary.

DEAR SIR,—I am sorry for all that passed between us here the other day, and I shall be glad if you would come back at once to your duty. We shall no doubt pull together on the same terms as we did before. The Magistrate and

Collector are here. I waited upon him (the latter) this morning and he gave me very sound instructions on all matters.

Yours sincerely,

(Sd.) RAM GOPAL ROY CHOWDHURI."

I trust the Indian Medical Association will endeavour to take some steps to put a stop to these insults to qualified private practitioners.

Yours &c., HARA KALI SEN.

RAIGA J, The 22nd February, 1895.

GOVERNMENT IGNORES THE CERTIFICATES OF PRIVATE PRACTITIONERS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The above subject demands the serious attention of the Government and of the Indian Medical Association. It is not for an individual or insignificant slight to myself that I now draw attention to it. It seems so unjust and preposterous that the certificates of private practitioners, who are persons of no less qualifications than the majority of those whose circumstances have compelled them to accept Government service, should be granted. This it appears to me is one of the main causes, why a certain class of qualified medical men (men who prefer to live by independent practices, and who, no doubt, consist of a large majority of the medical world), are daily growing insignificant in the eyes of the public. Certainly there exist but few men in a village who can afford to pay for the attendance of a qualified man regularly. And in the case of their being Government employees, they cannot produce the certificates of their *unofficial* medical attendants (however qualified they may be): and at times of emergency are compelled to secure the help of a Government medical man, whether they like him or not. Thus practically private practitioners are no longer held to be in the same rank with them. And when the Government does not trust or recognize these men, how can one expect the people at large to trust their lives in their hands? They, as private medical men are not even entitled to give a certificate at a simple police case, for a small bruise or hurt. I bring this before your kind notice, for lately a case happened in the Shillpore C. E. College. A student had an attack of simple fever and I gave him a certificate of ill-health; but Dr. DINDO BUNDOO DUTT of the said College refused to recognize any certificate, on the plea that I did not hold a Government appointment! I was compelled to bring this before the notice of the Civil Surgeon of Howrah, but he has not answered my letter yet! Will you be so kind as to inform me what the standing rule of Government is on this subject, and whether L. M. S's and M. B.'s are, or are not equally entitled to grant certificates?

Yours, &c., B. B. CHATTERJEE, M.B., Shillpore.

"WHAT ARE THE QUALIFICATIONS OF CIVIL HOSPITAL ASSISTANTS?"

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—With reference to the article "What are the qualifications of Civil Hospital Assistants," by Dr. ALF. MCC. DALLAS, which appeared in your issue of 16th March

1895. I beg to append herewith (1) a statement of the subjects taught in the Madras Medical College for the Hospital Assistant Department, and (2) an extract from the order of the Government of Madras on the proceedings of the Director of Public Instruction, Madras.

(1) *Statements of subjects taught.*

| Subjects. | Nominal text books. | Actual works taught. |
|--------------------------|---------------------|-------------------------------------------------------------------------------------------|
| 1. Anatomy | Wilson's | (1) Latest edition of Gray's anatomy and (2) latest edition of Heath's practical anatomy. |
| 2. Materia Medica | Whitla's | (1) Mitchell Bruce and notes from British, and Indian Pharmacopœia's. |
| 3. Physiology | Ashby's | Notes from Kirke's. |
| 4. Medicine | Husband's | Notes from Robert's. |
| 5. Surgery | Walsham's | Notes from Treves's other works. |
| 6. Midwifery | Meadow's | Playfair's and notes from Galabin's. |
| 7. Hygiene | McNally's | King's manual and notes from Park's. |
| 8. Minor Surgery | Heath's | Do. |
| 9. Medical Jurisprudence | Husband's | Do. |

(2). *Extract.*

"The Director's suggestion that the Hospital Assistant Department should be thrown open to failed candidates for matriculation, need not be considered at present; there is no reason to anticipate an insufficiency in the number of matriculates in future years, and the only way of forcing the educational standard of Hospital Assistants is by adhering to the present admission rules until they are plainly proved to be unworkable." (Paragraph 1, G. O. No. 616, Educational, dated 18th August 1894).

Let me now ask whether DR. DALLAS is justified in passing such a sweeping remark on Civil Hospital Assistants in general? I respectfully request him to confine his remarks to vernacular licentiates of Bengal or Bombay, and not to extend them to those of Madras, who were also included in the generic term "Civil Hospital Assistants."

Yours, &c., V. S. A. P.

Madras Medical College.

MADRAS, 23rd March 1895.

REVIEWS.

THE MEDICAL ANNUAL FOR 1895. Demy 8vo. pages 640. (Published by JOHN WRIGHT & Co., Stone Bridge, Bristol.) Price 7s. 6d.

The Medical Annual for 1895, which has now reached its 13th year of publication, is no way behind its predecessors, indeed it seems to get better and better every year. There are no less than 35 contributors for this year's issue, and among the addenda may be mentioned the very excellent section devoted to *Eye-sight and School-life*, so ably contributed by SIMON SNELL, F.R.C.S. This article is embellished with 7 beautiful photo-tint plates. DR. G. E. SHUTTLEWORTH contributes an article on *Sporadic Crinism treated by thyroid extract*, which is also illustrated with plates. The anti-toxin treatment of diphtheria is

discussed by DR. ARMAND BRYSON in a very scholarly manner, and contains an epitome of his recent researches on the subject. We may mention that the list of contributors does not consist of any one special nationality or school. The authors belong to very diverse nations, and are scattered over many continents.

There are the usual lists of asylums, homes, hospitals and medical schools, hydrotherapeutic establishments, nursing institutions, tutors, &c., which combine together and enhance the general utility of the *Annual*. The plan and topographical arrangement of the work, as in former years, has been preserved. To the busy practitioner this volume should be especially dear, affording, as it does, the most valuable and up-to-date treatment and the most recent thought on matters medical. For its nominal price, the amount of information it contains, and the number of photo-tint and other plates explanatory of the sections devoted to them, the treatise to our reckoning stands *primus* among all others of this nature, while the excellent and superior quality of the paper, printing and binding are more than could be desired. MR. WRIGHT is to be congratulated for such an excellent issue as the one for 1895.

ANGLO-URDU MEDICAL HAND-BOOK OR HINDUSTANI GUIDE:

For the use of medical practitioners in India. Compiled by REV. GEORGE SMALL, M.A., Missionary to Asiatics in London and formerly Missionary at Benares; with the aid of SURGEON-GENERAL C. R. FRANCIS, M.D. (Lond.), M.R.C.P., L.S.A., &c., late of Calcutta Medical College, and of MRS. NASH, L.R.C.P., & S. late Medical Missionary, Hyderabad. (Calcutta: Thacker Spink & Co. p.p. 200.)

This little medical hand-book will no doubt be welcomed by medical missionaries and surgeons generally (male and female), who have completed their curriculum at home and contemplate coming out to India to practise. The author very properly recommends that the hand-book be perused concomitantly with their other studies, prior to leaving England, and also its adoption in the various hospitals, dispensaries and teaching schools in India as a sort of text-book for the training of nurses, and dressers, &c.

Certainly for those unacquainted with the vernacular (and even for the permanent Indian resident), this little *opusculum* is a boon. The various subjects treated of are divided into separate sections and grouped in alphabetical order for facility of reference. Surgeon-General C. R. FRANCIS adds a most valuable index to native medicines, accurately describing each drug and giving its therapeutic uses and dose. The index contains the *pharmacopœi* and vernacular terms used to designate the drug.

In addition to the discussion of matters purely medical, there are added *dialogues* (in English, with vernacular rendering) *between doctors and patients*, and a tabulated series of *helps to diagnosis*, which will, no doubt, be very helpful to the *dilettanti* student and the riper general practitioner, or medical missionary.

The work was originally intended for *lady* medical missionaries for the benefit of the down-trodden women of India, but we venture to think with the author, that it will be more generally useful.

Government Medical Gazette.

GOVERNMENT OF INDIA.

Surgn. Lieut.-Col. F. W. Wright, D.S.O., M.B., 6th Regt., Beng. (Light) Infy. furlough for one year.

Services of Brig.-Surgn. Lieut.-Col. G. Hutcheson, M.D., Surg. Commr. and Dep't. Genl. of Vaccination, N.W.P. and Oudh, replaced at disposal of Milly. Dept.

Surgn. Lieut.-Col. J. F. P. McConnell, M.D., F.R.C.P., I. M. S., Profr. Materia Medica and Clin. Med. Med. Coll., and ex-officio 2nd Physien. Coll. Hosp., special leave (s.p.a.) for six months.

Surgn. Lieut.-Col. R. L. Dutt, M.D., I. M. S., Civil Surgn., Hooghly, to offic. as Profr. of Materia Medica and Clin. Med. Med. Coll., and ex-officio 2nd Physien. Coll. Hosp., during absence of Surgn. Lieut.-Col. J. F. P. McConnell.

Surgn.-Col. L. D. Spencer, M.D., I. M. S., Beng. Estab., granted temp. rank of Surgn. Maj.-Genl. from 1st April, during absence of Surgn. Maj.-Genl. R. Harvey, M.D.

Brig.-Surgn. Lieut.-Col. G. Hutcheson, M.D., I. M. S., Beng. Estab., granted temp. rank of Surgn.-Col. from 1st April, during absence of Surgn.-Col. G. Thomson.

Brig.-Surgn. Lieut.-Col. G. McBride Davis, M.D., I. M. S., Beng. Estab., granted temp. rank of Surgn.-Col. from 31st March, vice Surgn.-Col. L. D. Spencer.

Surgn.-Col. R. Harvey, M.D., D.S.O. and C. E. McVittie to be Surgn. Maj.-Genl., 1st April.

Surgn.-Majs. George Spiers Alexander Ranking, M.D., Robert Davidson Murray, M.B., Dennis Wood Comins, Patrick Fenelon O'Connor, James Moran, M.D., William Allagon Simmonds, Roderick Macrae, M.B., Thomas Elwood Lindsey Bate, Nibtram Borah, M.B., who have completed 20 years' full pay service, to be Surgn. Lieut.-Col.

Surgn.-Col. Jesse Griggs Pilcher, I. M. S., to retire from 29th March.

Surgn. Lieut.-Col. Thomas Robinson, M.B., to retire from 30th March.

BENGAL GOVERNMENT.

Syed Ali Hussin made over charge, Muzaffarpur Jail, to Surgn.-Maj. A. Tomes on 28th March.

Surgn.-Maj. F. S. Peck made over charge, Muzaffarpur Jail to Syed Ali Hussin on 24th March.

Surgn.-Capt. E. Harold Brown made over Darbhanga Jail to Asst. Surgn. Nobin Chunder Dutt on 26th March.

Asst. Surgn. Benode Behary Ghosal to do superny. duty at Presdy. Genl. Hosp., until further orders.

Asst. Surgn. Abinash Chunder Ghosh, Teacher of Med. Path. Hyg. Cuttack Med. School, leave for two months and a-half.

Asst. Surgn. Saroda Prosad Das apptd. to sub-divn. and dep'ty., Brahmanberia, in Tippera Dist.

Services of 1st class Milly. Asst. Surgn. P. Toomey, Dep't. Supdt., Dalanda Lunatic Asylum, placed at disposal of Govt. of Punjab.

First class Milly. Asst. Surgn. J. R. Rodricks, Med. Offr., to be Asst. Dep't. Supdt., Dalanda Lunatic Asylum.

First class Milly. Asst. Surgn. V. M. Carleton apptd. med. offr., Sandheads.

Asst. Surgn. Nobin Chunder Dutt made over Darbhanga Jail to Surgn.-Capt. F. P. Maynard on 27th March.

Surgn.-Maj. G. Jameson made over Malda Intermediate Jail to Babu Ram Narain Banerjee on 1st April.

Surgn.-Capt. J. G. Jordan made over Barisal Jail to Surgn. Lieut.-Col. Keshi Pathy Gupta on 2nd April.

Babu Devo Nath Dey made over Jalpaiguri Jail to Dr. J. L. Headley on 2nd April.

Babu Ram Narain Banerjee made over Malda Jail to Asst. Surgn. Narendra Nath Gupta on 8th April.

Surgn.-Capt. B. H. Desre as Civil Surgn., Howrah, 1st to 9th April, during absence, on furlough, of Brig.-Surgn. Lieut.-Col. H. Farves.

Surgn.-Maj. R. D. Murray, Offg. Civil Surgn., Chittagong, apptd. Civil Surgn., Howrah, until further orders from 10th April.

Services of Surgn.-Capt. R. E. Deane placed at disposal of Govt. of India in Milly. Dept.

Surgn.-Capt. J. R. Ains granted six months' extra ordinary leave (s.p.a.) without pay in extension of furlough associated, 30th Oct. 1904.

First class Milly. Asst. Surgn.-Capt. Charles Apple, Asst. Surgn. Supdt., Family Genl. Hosp.

Surgn.-Capt. F. P. Maynard made over Darbhanga Jail to Asst. Surgn. Nobin Chunder Dutt on 26th April.

Asst. Surgn. Mohanrao Nath Gupta, Sandheads, Sandheads Medica, Campbell Med. School, leave for two months.

Asst. Surgn. Ganes Chandra Mishra to do superny. duty at Med. Coll. Hosp., 6th April.

Asst. Surgn. Baroda Kanto Roy to do superny. duty at Med. Coll. Hosp. from 18th April.

Surgn. Lieut.-Col. J. F. P. McConnell, M.D., F.R.C.P., I. M. S., Profr. Mat. Medica and Clin. Med. Med. Coll., and ex-officio 2nd Physien. Coll. Hosp., special leave (s.p.a.) for six months, from date on which he may avail himself.

Surgn. Lieut.-Col. B. L. Dutt, M.D., I. M. S., Civil Surgn., Hooghly, to offic. as Profr. of Mat. Medica and Clin. Med. Med. Coll., and ex-officio 2nd Physien. Coll. Hosp., during absence of Surgn. Lieut.-Col. J. F. P. McConnell.

Surgn.-Maj. Robert Davidson Murray, M.B., Dennis Wood Deane Comins, Roderick Macrae, M.B., who have completed 20 years' full pay service to be Surgn. Lieut.-Cols, 31st March.

Surgn.-Capt. Granville Jameson, M.B., who has completed 12 years' full pay service to be Surgn.-Maj., 31st March.

PUNJAB GOVERNMENT.

Surgn.-Capt. W. H. E. Woodwright, charge of Jhelum on 22nd March.

Transfers.—First class Hosp. Asst. Sawan Mal, from Amritsar to Phillour Diap., Jullundur Dist., which he joined on 14th March, relieving 1st class Hosp. Asst. Barkat Ali.

First class Hosp. Asst. Barkat Ali, from Phillour Diap., Jullundur Dist., to Lelah Diap., Dera Ismail Khan Dist., which he joined on the 23rd March, relieving Asst. Surgn. Lachman Das, I.

Asst. Surgn. Lachman Das, I, from Lelah Diap., Dera Ismail Khan Dist., to Delhi for genl. duty, 26th March.

Milly. Asst. Surgn. J. T. Weston is apptd. to offic. temp. as Supdt. of Chenawan Central Jail, from 26th March, vice Surgn.-Capt. D. T. Lane.

Surgn.-Capt. G. H. Frost assumed charge Dera Ismail Khan Dist., on 31st March, relieving Surgn.-Maj. G. S. Griffith.

Milly. Asst. Surgn. J. T. Weston reported himself at Lahore for duty, 16th March and assumed charge of Muzaffargarh Dist. 23rd March, relieving Asst. Surgn. Jaswant Bai, Rai Bahadur.

Asst. Surgn. Jaswant Bai, Rai Bahadur, resumed charge of Muzaffargarh on 25th March, relieving Milly. Asst. Surgn. J. T. Weston, transferred.

Asst. Surgn. Fattah Chand, M.B., is apptd. to offic. as Civil Surgn., Rohtak, from 27th March, vice Surgn.-Capt. C. H. James.

Services of Surgn.-Capt. C. H. James, offg. Civil Surgn. Rohtak, replaced at disposal of Govt. of India in Home Department from 27th March.

On return from priv. leave, 1st class Hosp. Asst. Sadi Khan resumed charge of Shahkot Diap., Gujranwala Dist., on 30th March relieving 3rd class Hosp. Asst. Fazl Elahi.

On return from priv. leave 3rd class Hosp. Asst. Alam Shah was apptd. to Jhelum Jail and Police House, which he joined on 25th March, relieving 1st class Hosp. Asst. Parmanand.

Transfers.—Asst. Surgn. Gobind Ram, doing genl. duty at Meoltan, to Ry. Hosp., Khanpur, N.W. Ry., which he joined on 8th March, relieving Asst. Surgn. Jai Kishan Das.

Asst. Surgn. Jai Kishan Das, from Ry. Hosp., Khanpur, N.W. Ry., to Kulu Diap., which he joined on 26th March, relieving Asst. Surgn. Ram Narain, II.

Asst. Surgn. Alla Ditta, from Rawari Diap., Gurguon Dist., to Umballa Civil Hosp., which he joined on 25th March, relieving Asst. Surgn. Khazan Chand.

Asst. Surgn. Bani Narain, I, Asst. to Civil Surgn. at Delhi, relieved Asst. Surgn. Hool Chand of Delhi Civil Hosp. on 26th March as temp. measure.

Services of Asst. Surgn. Hattam Das, Imperial Lab. being no longer reqd. by Fisheries Dept. he reported himself to Principal, Lahore Med. Coll. on 23rd March for genl. duty at Mayo Hosp.

Asst. Surgn. Mangal Singh, Mayo Hosp., Rawalpindi Dist., has been placed temporarily on leave from 18th March. 2nd class Hosp. Asst. Goverdhan Das, from Bawalpur to Rawalpindi Dist., which he joined on 18th March.

Hosp. Asst. Mangal Singh, Imperial Dist., from Mayo Hosp., Lahore, to Mayo Hosp., Rawalpindi Dist., which he joined on 1st April, relieving 3rd class Hosp. Asst. Goverdhan Das, who reverted to Rawalpindi Civil Hosp. on 2nd April. Asst. Surgn. Khanna Chand, from Simla to Sialkot Civil Hosp., which he joined on 28th March, relieving Asst. Surgn. Mehta Duni Chand.

Second class Hosp. Asst. Mangal Sain, from Anandpore Disp. to Hoshiarpur for genl. duty, from 18th March.

The services of 3rd class Hosp. Asst. Sant Singh and 3rd class Hosp. Asst. Mangal Sain, doing genl. duty at Hoshiarpur, were placed at disposal of the N.W. Ry. for duty in connection with pilgrim traffic, respectively, from 22nd and 30th March.

The services of 1st class Mily. Asst. Surgn. P. Toomey having been placed at disposal of Inspn.-Genl. of Civil Hosps., Punjab, he was apptd. to charge of N.W. Ry. Hosp., Lahore, from 29th March, relieving Asst. Surgn. J. D. Roberto.

On being relieved of charge of N.W. Ry. Hosp., Lahore, Asst. Surgn. J. D. Roberto was apptd. to do genl. duty at Mayo Hosp., Lahore, on 30th March.

Surgn.-Capt. A. T. Bow made over charge of Kalat Jail to Surgn.-Lieut. H. J. K. Bamfield on 30th March.

Surgn.-Capt. C. H. James made over charge of Rohtak Jail to Asst. Surgn. Fattah Chand on 27th March.

Asst. Surgn. J. T. Weston, M.D., is apptd. to offic. as Supdt. of Chenawan Central Jail from 28th March, *vice* Surgn.-Capt. D. T. Lane, proceeded on mily. duty.

Asst. Surgn. Radha Kishen, Rai Bahadur, in charge of Gurdaspur Civil Disp., as Civil Surgn. of Gurdaspur, in addition to his own duties from 4th April, *vice* Surgn.-Capt. D. M. Davidson, proceeding to Dalhousie.

Surgn. Lieut.-Col. E. Palmer assumed charge of civil med. duties of Mardan on 2nd April, relieving 1st class Hosp. Asst. Ghulam Rasul, who held charge from 1st April, in addition to other duties.

Surgn.-Capt. D. M. Davidson assumed charge of Dalhousie Sanitarium on 8th April.

Surgn.-Capt. A. W. T. Baist-Sparks, attached to Med. Coll., Lahore, apptd. to offic. as Civil Surgn. Ferozepore, from 6th April, *vice* Surgn.-Capt. W. R. Clark.

Surgn.-Col. D. O'C. Baye, M.D. assumed charge of office of Inspn.-Genl. of Civil Hosps., Punjab, on 11th April.

Transfers.—Asst. Surgn. Mool Chand, from Delhi to Mooltan Civil Hosp., 9th April relieving Asst. Surgn. Kikar Nath Bhandari.

Asst. Surgn. Mehta Duni Chand, from Sialkot to Umballa Civil Hosp., 8th April, relieving Asst. Surgn. Alla Ditta, apptd. to do genl. duty at Umballa Civil Hosp. from that date.

First class Hosp. Asst. Muhammad Ishaq, Sadhaura Disp. Umballa Dist., leave (*m.c.*) from 8th Jan. to 23rd March.

Third class Hosp. Bhagat Ram, attached to Swat River Canal Disp., having passed prescribed test in Pashtu, entitled to extra allowance of Rs. 5 per mensem, Asst. from 30th March and as long as employed in Pashtu-speaking tracts.

On being relieved of charge of Muzaffargarh Dist., Asst. Surgn. Jawant Rai, Rai Bahadur, granted priv. leave for 23rd, 24th and 25th March.

2nd class Hosp. Asst. Des Raj, attached to Kot Isa Disp., Bhag Dist., having passed Eng. qualifu. exam. entitled to higher rate of pay of his grade from 5th April.

Surgn.-Capt. H. J. M. Baist assumed charge of Jhelum Dist. on 30th of March, relieving Surgn.-Capt. W. H. E. Woodwright.

Surgn.-Lieut. H. J. K. Bamfield assumed charge of Kohat Dist. on 30th March, relieving Surgn.-Capt. A. T. Bow.

The furlough to Europe granted to Surgn.-Capt. H. Bamfield, Civil Surgn., Peshawar, commenced in India on 3rd April 1901, at end of his subsidiary leave without forfeiture of that leave.

Surgn.-Lieut. E. A. E. Newman assumed charge of Dehra Ghazi Khan Dist. 23rd March, relieving Surgn.-Maj. J. W. Rodgers.

Surgn.-Capt. A. W. T. Baist-Sparks, M.D., M. C. (Eng.) whose services have been placed temporarily at disposal of Punjab Govt., attached to Lahore Med. Coll. as tempy. arrangements from 28th March.

3rd class Hosp. Asst. Natak Chaul was apptd. to City Disp., Karnal, and entrusted charge on 1st March, relieving 3rd class Hosp. Asst. Amir Khan.

MADRAS GOVERNMENT.

Surgn.-Maj. A. J. O'Hara, extension of priv. leave for one month.

BOMBAY GOVERNMENT.

Brig.-Surgn. Lieut.-Col. James Arnott, M.D., C.M. furlough for eight months fifteen days.

Surgn.-Maj. H. W. B. Boyd, M.D., M.C.S.I., to act. physician, St. George's Hosp., Bombay, in addition to his own duties, during absence of Brig.-Surgn. Lieut.-Col. J. Arnott, M.D., C.M.

Asst. Surgn. Kalkhaashru Sorabji, Engineer, L.M. & S., promoted from 2nd to 1st class of Asst. Surgns. from 23rd March.

Asst. Surgn. Venkatesh Balwant Karannikar, B.A., L.M. & S., apptd. to med. charge of Sirdi Disp. from 24th March.

Asst. Surgn. Phirozebah Palanjli Mallan, L.M. & S., apptd. to med. charge of Sunderias Mulji Disp. at Jalgaon from 28th March, *vice* Asst. Surgn. Magazal Motilal Modi, L.M. & S., transferred.

The following transfers are sanctioned:—

Surgn.-Lieut. A. P. Fernandez, Sena. Asst. Surgn., from Khandesh Bhil Corps, Dharrugan, to Mily. Dept., 9th March.

Transfers of Hosp. Assts.—Ramchander Narsinh, from Civil Hosp., Nasik, to genl. duty, Nasik, 19th March; Narayan Luximon, from Simar Disp. to Civil Hosp., Nasik, from 19th March; Krishnaji Dattatraya, from Civil Hosp., Belgaum, to genl. duty, Belgaum, from 3rd March; Ganpati Niloba, from leave to genl. duty, Poona, from 15th March; Maneklal Manondas, from Ranpur Disp. to genl. duty, Ahmedabad, from 23rd March; Ramchander Gangadhar, from genl. duty, Poona, to Junnar Disp., from 15th March, *vice* Hosp. Asst. Shuk Abdul Razak, granted leave; Chintamon Yawar, from Amol Disp., genl. duty, Ahmedabad, from 8th March; Ebrahim Khan, from leave to Prison Hosp., Thana, from 5th March, *vice* 3rd class Hosp. Asst. Luximon Bhiwaji Yawar, transferred; Luximon Bhiwaji Yawar, from Prison Hosp., Thana, to genl. duty, Thana, from 5th March; Ramji Bapuji from Civil Hosp., Ratnagiri, to Vengurla Disp. tempy., from 3rd March, *vice* Asst. Surgn. C. M. Rodrigues, transferred; Abdul Latif, from genl. duty, Karwar, to Honavar Disp., tempy., from 3rd March, *vice* Hosp. Asst. Hari Trimbak, granted leave; Chintamon Bullal, from leave 14th March, to genl. duty, Bombay, from 15th March; Chintamon Bullal from genl. duty, Bombay, to Roman Catholic Orphanage School, Poona, from 19th March, *vice* Hosp. Asst. Venkaji Dewji, transferred; Yeshwant Galnaji, from genl. duty, Nasik, to Patur Disp., tempy., from 21st March, *vice* Hosp. Asst. Guranan Krishnas, transferred; Bhawaniprasad Bhugwanlal, from genl. duty, Ahmedabad, to C. J. Ophthalmic Hosp., Bombay, from 27th March, *vice* Hosp. Asst. Azimudin Hamiduddin transferred; Abanaram Bapuji, from Khandesh Bhil Corps, Dharrugan, to genl. duty, Dhulla, from 16th March; D. K. Pandit Leckraj, from N.W. Ry. Workshop, Sukkur D., to N.W. Ry. Bhil Disp., from 18th Feby.; Chakrimal Sontias, from Central Prison Hosp., Hyd., to Civil Hosp., Hyd., 20th Feby., and then to Dist. Prison, Karnool, from 19th March.

The undermentioned are allowed leave:—Hosp. Asst. Shaik Abdul Razak, Junnar Disp., priv. leave for one month from 15th March; Hosp. Asst. Hari Trimbak, Honavar Disp., priv. leave for twenty days from 1st March; Hosp. Asst. Prabhakar Shanker Sohoni, Gwalior Tejga. Hosp., Bombay, priv. leave for two months from 14th March; the priv. leave granted to Hosp. Asst. Syed Abdul Mainman, extended for one month; Hosp. Asst. Chaudhmal Khawasji Dist. Prison, Karnool, priv. leave for two months from 10th March; Hosp. Asst. Harmandi Senmal, priv. leave for one month from 25th Feby.

Asst. Surgn. Venkatesh Balwant Karannikar permitted to draw increased rate of allowances at Rs. 40 per month.

Hosp. Asst. Gungdo Nandiv is confirmed in his appt. at the Prison Hosp., Yerrowda.

Hosp. Asst. Kassinath Anant. confirmed in his appt. at the Satana, Dispy.

Hosp. Asst. Bukharam Bhicaji, on fair duty, Gokarn, from 18th Feby. to 1st March.

Hosp. Asst. Abdul Latif attached to Prison Hosp., Karwar, from 19th Feby. to 1st March.

Hosp. Asst. Pasubram Nagesh attached to Prison Hosp., Karwar, from 1st to 4th March.

Hosp. Asst. Tejamal Dhal'amal placed under treatment at Central Prison Hosp., Hyderabad, from 12th Jany. to 19th Feby.

Hosp. Asst. Shanker Gungulher Datt (returned from leave), placed on genl. duty, Ahmednagar, from 17th March.

Hosp. Asst. Shiwaram Narayan, (returned from leave), reed. charge of Raipur Dispy., on 16th March.

Hosp. Asst. Narayan Dhondu (returned from leave), reed. charge of Sinner Dispy., on 16th March.

Hosp. Asst. Govind Jauardau, (returned from leave), reed. charge of Civil Hosp., Belgaum, on 3rd March.

Hosp. Asst. Balkrishna Mahadev (returned from leave), rejoined N.-W. Ry. Workshop Dispy., Sukkur, on 17th Feby.

CENTRAL PROVINCES GOVERNMENT.

On being relieved of med. charge of Camp of Chief Commr., Central Prov., Asst. Surgn. Mrigendra Lal Mitra is apptd. to do duty under Civil Surgn., Nagpur.

Asst. Surgn. Mrigendra Lal Mitra, from under Civil Surgn., Nagpur, to Main Dispy., Khadwa.

Civil Hosp. Asst. Pandurang Lakshman, from under Civil Surgn., Seoni, to duty under Civil Surgn., Chanda.

Civil Hosp. Asst. Madhu Sudan Das, of Main Dispy., Raipur, held temp. med. charge of Police Hosp., Raipur, in addn. to his own duties, from 20th to 27th March.

Civil Hosp. Asst. Abid Hussain, from under order of Civil Surgn., Nagpur, to Central Jail Hosp., Jubbulpore.

Civil Hosp. Asst. Mehdi Hussain, from Central Jail Hosp., Jubbulpore, to Sihora Branch Dispy., Jubbulpore Dist.

Civil Hosp. Asst. Muhammad Siddiq, temp. attached to Sihora Branch Dispy., Jubbulpore Dist., to duty under Civil Surgn., Jubbulpore.

The services of the undermentioned Civil Hosp. Assts. doing duty from under Civil Surgn., Jubbulpore, are placed temp. at disposal of Surgn.-Genl. with Govt. of India, for temp. mil. duty in Jubbulpore Cantonment Hosp.:

Civil Hosp. Asst. Muhammad Siddiq and Krishna Pershad. Civil Hosp. Asst. Surji Rao, attached to Police Hosp., Saugor, placed temp. at disposal of Surgn.-Genl. with Govt. of India, for temp. mil. duty in Cantonment Hosp., Saugor.

Civil Hosp. Asst. Bhundulal, from under orders of Civil Surgn., Saugor, temp. to Police Hosp., Saugor.

On being relieved by Hosp. Asst. Wali Muhammad, from Bajim Fair, Civil Hosp. Asst. Muhammad Zuhurul Haq, temp. attached to Arung Branch Dispy., Raipur Dist., to duty under Civil Surgn., Raipur.

Civil Hosp. Asst. Bhagwan Dass, temp. attached to Main Dispy., Chhindwara, permanently apptd. to same dispy. On return from sick leave Civil Hosp. Asst. Hashmat Ali to do duty under Civil Surgn., Jubbulpore.

On being relieved by Civil Hosp. Asst. Shaikh Muhammad Hamzan, Civil Hosp. Asst. Ram Krishna Palkaji, temp. attached to Pandhana Branch Dispy., Nimar Dist., to do duty under Civil Surgn., Nagpur.

Surgn.-Capt. E. Jennings, doing duty under Civil Surgn., Nagpur, apptd. to be Civil Surgn. of Betul.

Surgn.-Capt. E. Jennings, Civil Surgn., Betul, to executive med. charge Betul Jail.

Surgn.-Maj. J. L. Poynder, Civil Surgn., Sambalpur, to offic. as Civil Surgn., Raipur, vice Surgn. Lieut.-Col. B. Evers on leave.

Surgn.-Capt. W. D. Sutherland, Civil Surgn., Damoh, to offic. as Civil Surgn., Sambalpur.

Surgn.-Capt. W. D. Sutherland, Off. Civil Surgn., Sambalpur, to executive and med. charge of Sambalpur Jail.

Asst. Surgn. Lakshmi Narayan Chaudhri, Off. Civil Surgn., Betul, to offic. as Civil Surgn., Damoh.

Asst. Surgn. Lakshmi Narayan Chaudhri, Off. Civil Surgn., Damoh, to executive and med. charge of Damoh Jail.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Maj. F. C. Chatterji, Civil Surgn., Pilibhit, recalled from priv. leave to Mainpur Dist.

Surgn.-Maj. E. S. Brander, Civil Surgn., from Mainpur to Muttra.

Senior Apoth. S. P. Bond, Retired List, from civil med. charge of Partabgarh Dist. to Sultanpur Dist.

Surgn.-Capt. J. W. Bullen, M.D., A. M. S., to Ranikhet in addn. to mil. duties, from 1st April.

Surgn.-Capt. J. M. Cadell, Off. Civil Surgn., Sultanpur, to camp of H. H. Lieut.-Govr. and Chief Commr., N.-W. P. and Oudh.

Sent Apoth. S. P. Bond, Retired List, in civil charge of Sultanpur Dist., to visiting charge of Partabgarh Dist. in addn. to his other duties.

Asst. Surgn. Bihari Krishna Basu, in charge of Sadar Dispy., Partabgarh, to civil charge of that dist. in addition to his own duties.

Surgn.-Capt. L. J. Pisan, Civil Surgn., Jaunpur, furlough out of India for six months, (m.c.) from 16th April.

Mil. Asst. Surgn. W. H. Butcher, Asst. to Civil Surgn., Allahabad, to civil charge of Fatehpur Dist., as temp. measure.

Surgn.-Maj. C. P. Lukis, Civil Surgn., Shahjahanpur, to visiting charge of Hardoi Dist., in addn. to his other duties, as temp. measure.

Surgn.-Capt. A. E. Roberts, Civil Surgn., Aligarh, to visiting charge of the Muttra Dist., in addition to his other duties, as a temp. measure.

Surgn. Lieut.-Col. J. Armstrong, Civil Surgn., Cawnpore, to visiting charge of Etawah and Unao Dist., in addn. to his other duties, as a temp. measure.

Surgn.-Capt. J. J. Pratt, Civil Surgn., Gonda, to visiting charge of Bahraich Dist., in addn. to his other duties, as temp. measure.

Asst. Surgn. Shankar Lal, in charge of Sadar Dispy., Etawah, to civil charge of that dist., in addn. to his other duties, as temp. measure.

Asst. Surgn. Iktidar-ud-din, in charge of Sadar Dispy., Hardoi, to civil charge of that dist., in addn. to his other duties, as temp. measure.

Asst. Surgn. Man Mohan Das, in charge of Sadar Dispy., Muttra, civil charge of that dist., in addn. to his own duties, from 25th to 31st March.

Asst. Surgn. Nil Mani Choudhri, in charge of Sadar Dispy., Bahraich, to civil charge of that dist., in addn. to his own duties, as temp. measure.

Asst. Surgn. Shankar Das, in charge of Sadar Dispy., Unao, to civil charge of that dist., in addn. to his other duties, as temp. measure.

Asst. Surgn. Lalita Mohan Sen, on being relieved of charge of Dispy. at Ballia, to hold civil charge of Ballia Dist., (Korantadih).

Asst. Surgn. Saraju Kumar Mukerji, on being relieved of charge of Sadar Dispy., Gorakhpur, to reserve duty at Lucknow.

Surgn.-Maj. G. A. Emerson, Civil Surgn., from Fatehpur to Jaunpur.

Asst. Surgn. Ananda Prasad Datta, on being relieved of charge of Sadar Dispy., Kheri, to that of Sadar Dispy., Etah.

Asst. Surgn. Bihari Lal Pande, from charge of Sadar Dispy., Etah, to that of Nagina Dispy., Bijnor.

The services of the offrs. named below are placed temp. at disposal of Govt. of India, Home Dept.:—Surgn.-Maj. F. D. C. Hawkins, Civil Surgn., Etawah; Surgn.-Capt. W. G. P. Alpu, Civil Surgn., Hardoi; Surgn.-Capt. H. E. Drake-Brockman, Civil Surgn., Muttra; Surgn.-Capt. W. Vost, Civil Surgn., Bahraich; Surgn.-Capt. J. Chaytor-White, Off. Civil Surgn., Unao.

Surgn.-Maj. P. J. Freyer, Civil Surgn., 2nd class, to be Civil Surgn., 1st class, with grade station Allahabad, vice Brig.-Surgn. Lieut.-Col. A. Cameron, retired, from 1st April.

Surgn.-Maj. Freyer is posted, on promotion, to Benares.

Asst. Surgn. Baldeo Singh, from charge of Sadar Dispy., Jaunpur, to that of Sadar Dispy. at Ghazipur.

Asst. Surgn. Rajendra Nath De, from charge of Sadar Dispy., Ghazipur, to Sadar Dispy., Unao.

Asst. Surgn. Shankar Das, from charge of Sadar Dispy., Unao, to dispy. at Ballia.

Pandit Baldeo Prasad, Depy. Coll. Surgeon, Gorakhpur, on return from leave, to Farrukhabad Dist.

BURMA GOVERNMENT.

Hosp. Asst. Hsion Neeben Dass relinquished charge of Outpost Hosp., Kachal, N. Shan States, on 14th Feby., and assumed charge of Police Hosp., Mandalay, on 10th March.

Shah Kadir Bax, a qualified Hosp. Asst., without English qualification, is appt. to the 5th grade and posted to Rangoon for duty assumed charge of Jail Hosp., Rangoon, on 12th March.

Surgn. Capt. A. O. Evans made over, and Surgn.-Capt. R. H. Cantor assumed, executive and med. charge of Akyab Jail on 2nd March.

Maung Tha Noo, Local Asst. Surgn., made over, and Maung Tha Do Aug, Local Asst. Surgn., assumed, executive med. charge of Kyaukpyn Jail on 28th Feby.

Surgn. Capt. K. Prasad made over, and Surgn.-Maj. F. P. Nichols assumed, executive and med. charge of Shwabo Jail on 14th March.

Hosp. Asst. F. A. Jeyacala Rao relinquished charge of Central Jail Hosp., Rangoon, on 17th Jan. and assumed charge of Mogaung Myitkyina Railway Survey Party at Mandalay on 21st Jan.

Hosp. Asst. Syed Abdul Khader relinquished charge of Mogaung escort at Mogaung on 15th March and assumed charge of Police Hospital, Mogaung, Myitkyina dist., on 16th March.

Hosp. Asst. Prem Dass relinquished charge of escort duty at Bhamo on 21st March and assumed charge of Police Hosp., Bhamo, on 22nd March.

Hosp. Asst. Parakhit Chandra Rai relinquished charge of escort duty at Bhamo on 21st March and assumed charge of Police Hosp., Bhamo, on 22nd March.

Hosp. Asst. Raghunatha Singlu relinquished charge of escort duty at Mogaung on 7th March and assumed charge of Police Hosp., Mogaung, Myitkyina Dist., on 8th March.

Hosp. Asst. Peter Aquah relinquished charge of Jail Hosp. Thayetmyo, on 7th Feby. and assumed charge of Police Hosp., Monywa, Lower Chindwin Dist., on 19th Feby.

Hosp. Asst. Peter Aquah relinquished charge of Police Hosp., Monywa, Lower Chindwin Dist., on 21st Feby. and assumed charge of No. 8 Stockade, Chin Hills, on 8th March.

Hosp. Asst. Uma Chander Chuckerbutty relinquished charge of escort duty at Police Hospital, Bhamo, on 18th March.

Hosp. Asst. Bistoo Mohan Bose relinquishd. charge of Police Hosp., Mandalay, on 25th March, and assumed charge of Police Hosp., Shwabo, on 27th March.

Hosp. Asst. Lakmi Kanto Bose, attached to Mu Valley State Ry. Fifth Divn., Katha, placed under suspension, with loss of pay and allowances, from 12th to 17th March.

Hosp. Asst. Nil Kant Sattray, attached to Mu Valley State Ry. Fifth Divn., Katha, placed under suspension, with loss of pay and allowances, from 12th to 17th March.

Hosp. Asst. Shaik Abdul Haq, having qualified for promotion to next higher grade, entitled to the pay of same from 16th Oct 1894.

Local Asst. Surgn. Maung Tha Do Aug made over, and Mil. Asst. Surgn. F. W. A. L'Estrange assumed duties of Civil Surgn., Kyaukpyn Dist., on 29th March.

Hosp. Asst. Gobardhan relinquished charge of 4th Divn. Mu Val. State Ry. at Hopin on 28th March, and assumed charge of Railway Disp., Dabehn, Pegu Dist., on 31st March.

Hosp. Asst. Shaik Rahim Bakh, on availing himself of priv. leave of 8 months, relinquishd. charge of Genl. Hosp., Rangoon, on 3rd April.

Hosp. Asst. Hasbhat Ali, on availing himself of leave (m.c.) for 10 months, relinquishd. Jail Hosp., Moulmein, Amherst Dist., on 5th April.

Hosp. Asst. R. S. Deshmukha relinquished charge at Civil Disp., Henzada, on 10th April, and assumed charge of cholera duty at Bhamo, Henzada Dist., on 6th April.

Hosp. Asst. Taha Khan relinquished charge of Police Hosp., Mogaung, Myitkyina Dist., on 31st March.

Hosp. Asst. Syed Latif, on relieving from service, relinquished charge of Jail Hosp., Moulmein, Pegu Dist., on 31st March.

Hosp. Asst. C. C. Chackerbarty relinquished charge of Police Hosp., Bhamo, on 25th March, and assumed charge of Outpost Hosp., Shwabo, Bhamo Dist., on 25th March.

Hosp. Asst. Bhanswar Panda, on availing himself of priv. leave for three months, relinquished charge of Outpost Hosp., Shwabo, Bhamo Dist., on 18th March.

Hosp. Asst. Shaik Abdul Rahman, on return from leave, assumed charge of Jail Hosp., Moulmein, Amherst Dist., on 31st March.

Hosp. Asst. Parakhit Chandra Rai relinquished charge of Police Hosp., Bhamo, on 26th March, and assumed charge of Police Hosp., Mandalay, on 31st April.

Raghunatha Singha relinquished charge of Police Hosp., Mogaung, Myitkyina Dist., on 23rd March, and assumed charge of Police Hosp., Bhamo, on 3rd April.

G. O. C. C.

Surgn.-Capt. G. H. Frost, 45th Beng. Infy., from offg. charge of 22nd Beng. Infy. to charge of regt., vice Surgn. Lieut.-Col. H. Boyd.

Surgn.-Lieuts. J. W. Grant and L. Rogers, I. M. S., and Asst. Surgn. E. J. Gresson, I. M. S., passed lower standard in Hindustani.

Surgn.-Maj. J. C. Dorman, A. M. S., in med. charge, Convalescent Depot Naini Tal, to med. charge of Headquarters Staff and establs. of Beng. Command, from 1st April, in addition to his duties.

Brig.-Surgn. Lieut.-Col. R. dela C. Corbett, M.D., D. S. O., A. M. S., to be offg. P. M. O., Onndh and Rohilkand Dist., vice Surgn.-Col. W. T. Martin, A. M. S., granted leave out of India (m.c.)

ASSAM GOVERNMENT.

Surgn.-Col. W. P. Warburton, M.D., apptd. Inspn. Genl. Civil Hosp., N.-W. P. and Oadh, vice Surgn.-Col. J. G. Pilcher, F.R.C.S., from date on which he assumes charge.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence in Re. 1 for subscribers and Re. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

RODRIGUES.—On the 17th April, at Dadur, the wife of Asst. Surgn. P. H. Rodrigues, of a son.

MC CREERY.—On the 7th April, at Dagehal, the wife of Surgn.-Maj. B. T. McCrery, M.B., A. M. S., of a daughter.

BURLTON.—On the 11th April, at Landour, the wife of Surgn.-Maj. Burlton, A. M. S., of a son.

MARRIAGES.

GEORGE—LAMING.—On 15th April, at St. Andrew's Kirk, Bombay, by the Rev. B. M. Gray, M.A., Asst. Surgn. Ewen George, Medical Officer in charge R. I. M. Troopship Warren Hastings, youngest son of the late Dr. Lewis George, Civil Surgn., Kathiawar, to Beatrice Alice Laming, 2nd daughter of Charles Richard Laming, of Gosport, Hants, and granddaughter of Aquire Wilkinson, of Basingstoke, Hants, England.

MACROBIN—HOLLAND.—On 3rd April, at St. Stephen's Church, Bareilly, by the Rev. R. A. Cumine, Brig.-Surgn. Lieut.-Col. A. A. Macrobin, M.B., Med. Staff, to Jane Catherine, the only daughter of the late Philip Holland, Esq., of Swanmore Park, Gloucestershire.

RUSSEL—STALKART.—On 18th April, at St. Thomas' Church, Howrah, by the Rev. E. H. Larnet, Surgn.-Maj. Chas. S. Randle, I. M. S., of Thayetmyo, Burma, to Emilie, youngest daughter of the late John Stalkart, of Ghoseery, Howrah, and Rope Town, Sonadiah.

BURROUGHS.—On 18th March, at St. Simon's, Southern, Surgn.-Capt. Henry Gordon Bates, L. M. S., eldest son of the late Lieut.-Col. A. K. Bates, R. E., ex India, daughter of Lieut.-Col. F. H. Armstrong, Southern.

DEATHS.

HYMAN.—On 2nd April, at Masoorie, Claude Edward, the only son of Surgn.-Maj. and Mrs. J. Hyman, aged 4 years.
WRIGHT.—On 16th March, at West Wickham, Kent, Amelia, widow of Thomas Pettit Wright, Surgn.-Maj., Beng. Med. Dept.

NOTICES TO CORRESPONDENTS.

HINTS TO CONTRIBUTORS.

1. Write plainly and briefly and to the point. 2. Write on one side of the paper only. 3. Save postage by sending your papers by "Book Post," the wrapper having its sides open. 4. Every member of the Profession in India should do his little share in adding to the general stock of knowledge of tropical disease. 5. Write up interesting cases or a series of cases, give statistics bearing on the history, causation, prevention and treatment of disease. 6. Bear in mind that this Journal is a channel of communication between the members of our profession in the East; therefore send "Personal and General News items," and they will be recorded. 7. Write your views on socio-political topics, connected with the profession, official and non-official, in order to advance the interests of all sections of our calling. 8. Newspapers and journals sent for notice should have the parts intended for observation marked.

H. D. P. (Gonda).—Your paper received. Many thanks.

P. S. J. (Kulitalai).—Your article received, will appear in an early issue.

D. P. (Jubbulpore).—The *Gaujin Tibabat* is published in Lahore.

S. B. (Badnera).—Please read report of Association in this number.

K. R. D. (Udhakota).—Please see Cerna's *Newer Remedies*.

A. L. (Mandalay).—The Provident Fund is under consideration.

R. M. M. (Rajkote).—Will appear in our next number.

S. K. Mehta.—Apply to the Surgeon-General with the Government of Bombay, stating your case in full.

P. G. (Calcutta).—There are two Eurasians in the Calcutta Medical College; one a professor and the other a resident.

Hospital Soup.

T. M. WILKES. In answer to "Hospital Surgeon" in the *English Medical Journal*, about soup, I can commend both for cheapness and nutritive quality, the following recipe. To 1 lb. of lentils add 10 breakfast-cups of water, 1 onion, small pieces of carrot and turnip, pepper, and salt, and a lump of butter, fresh dripping, or ham bone, Boil two hours and a half and strain.

ACKNOWLEDGMENTS.

Wasserkopf's receipt of the following with thanks: *Journalists.*—*Lancet*—*British Medical Journal*—*Washington Medical Review*—*Medical Times and Hospital Gazette*—*Temperance Record*—*Universal Medical Journal*—*Medical Age*—*Medical Bulletin*—*Medical World*—*Good Health*—*Medical Brief*—*Australasian Medical Gazette*—*American Lancet*—*Toledo Medical Compass*—*Chemist and Druggist*—*Canadian Practitioner*—*Indian Medical Gazette*—*Ceylon Medical Journal*—*Medical Reporter*—*Nursing Record*—*Clinical Journal*—*Journal of the American Medical Association*—*Medical News*—*Sanitarian*—*Medical Week*—*Indian Medico-Chirurgical Review*—*New York Medical Record*—*New York Medical Journal*—*Edinburgh Medical Journal*—*Virginia Medical Monthly*—*Pacific Medical Journal*—*Provincial Medical Journal*—*Gaujin Tibabat*—*Gaillard's Medical Journal*—*Calcutta Journal of Medicine*—*Scalpel*—*The Practitioner*—*Medical Missions*.

Gazettes of the Governments of India, N. W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: *Indian Daily News*—*Langoon Gazette*—*Express*—*Indian Witness*—*Indo-European Correspondence*—*Morning Post*—*Indian Engineering*—*Eastern Guardian*—*Catholic Watchman*—*Western Wit and Wisdom*—*Indian Empire*—*Tribune*—*Indian Planter's Gazette*—*Times of India*—*Bombay Guardian*—*Anglo-Indian Advocate*—*Indian Mirror*—*Bengalee*—*Aurita*—*Bazar Patrika*—*The Sentinel*—*India*—*Punjab Patriot*—*Indian World*—*Calcutta University Magazine*.

BOOKS.—*The Medical Annual and Practitioner's Index 1895.* (Publishers: John Wright & Co., Stone Bridge, Bristol, 1895) Price 7s. 6d.

The Physiology of the Carbohydrates. By F. W. Pavy, M.D., LL.D., F.R.S. (Publishers: J. & A. Churchill, 11 New Burlington Street, London 1894). Price 10s. 6d.

Arnold & Sons' Catalogue of Surgical Instruments and appliances, 1894.

Literary Contributions and Letters from: D. Mackenzie, M.D., C.M., Rampur Boalia; Surgn.-Capt. Patrick Hehir, M.D., F.R.S.E., F.R.C.S.E., D.P.H., Hyderabad; Wm. Huntly, M.A., M.D., Kotah; Asst. Surgn. Purna Chandra Dass Gupta, L.M.S. Kishoregunge; Asst. Surgn. H. D. Pant, L.M.S., Gonda; Asst. Surgn. Harry Giffney, L.M.S., Masoorie; Asst. Surgn. Rumanath De, M.B., Madaripore; Ram Gopal Roy Choudhuri, Mohadeopore; Hara Kuli Sen, V.L.M.S. Mohadeopur; B. B. Chatterjee, M.B., Shillpore; and others.

BIRTH AND REGENERATION OF THE HEART AND KIDNEYS.

DR. BOLLINGER, director of the Anatomico-pathological Institute in Munich, asserts that it is impossible to find a normal heart and normal kidneys in an adult resident of that city. The reason for the change shown in the two parts upon these organs is the drinking of impure Munich beer, and the resulting impurities and regeneration are described in his paper. A second and third generation of the city was observed in the same manner, but the third generation was not observed in the same manner, as that the third generation was not observed in the same manner.

Original Articles.

OBSERVATIONS ON PARALYSIS AGITANS.

By SURGEON-CAPTAIN PATRICK HENRI, M.D.,

F.R.S.E., F.R.C.S.E., D.P.R., (Cantab).

Lecturer on Medicine, Hyderabad Medical School.

THE rarity with which one meets with cases of *paralysis agitans* (PARKINSON'S paralysis) in India, makes it perhaps interesting to note the circumstances under which each case occurs. The following are the notes connected with the third case of the kind I have met with in India: the first being one under the care of the late Surgeon-General D. B. SMITH in the Calcutta Medical College Hospital in 1879; the second being that of a lascar on board of a merchant sailing vessel known as the *John Davis*, in 1884.

Bhaji Rao, Hindoo, *æt.* 40 years, with 21 years' service as a pioneer in His Highness the Nizam's Regular Troops, came under observation on the 25th October 1893, having been transferred from one of the district stations of the Hyderabad Dominions for treatment in the Staff Hospital in Hyderabad. His native place was Gya, near Patna. He stated that two years ago, he began to notice that he was unable to march with his company with the same facility that he could before, that his speech was somewhat interfered with, that his head trembled as soon as he attempted to do any manual work, and that his body shook all over when he stood erect.

The previous history of the patient, as far as we are etiologically concerned, is, that he worked as a pioneer, and as such, was chiefly engaged in such occupations as road-making, excavating soil for various purposes, and especially for the construction of buildings. The work was sometimes severe; but, as a rule, did not exceed five hours a day. He had often been drenched on the roads, and otherwise exposed to inclement weather. Like all our local pioneers, he had suffered severely from the results of malarial infection, and, four years ago, had been on six months' furlough, after several attacks of ague, resulting in incipient malarial cachexia. There was no history of syphilis, nor of alcoholism. Careful inquiry was made as to any previous injury with negative results.

The patient first noticed, amongst the early symptoms, that he could not use either spade or pickaxe with the dexterity and freedom that he could normally, and that these implements of his calling, occasionally fell out of his hands whilst using them, and next, that when on parade, he would be in a state of terror and anxiety the whole time, lest his condition should be noticed. He also observed that the left side was more affected than the right, but from the beginning, all the muscles in the body were more or less implicated.

Present condition.—On admission into the Staff Hospital, it was found that the patient was suffering from an advanced stage of the disease. He was considerably emaciated, and much debilitated. Bowels constipated. The most pronounced symptom was that of tremor, which, on the patient's standing, was visible in every group of muscles of the body, and in all groups the vibrations were rhythmic and synchronous. The only muscles which appeared to escape were those of the head, face and trunk, although

the muscles which proceeded from the latter partook in the general tremor when the patient was excited, fatigued from long standing, or when under observation. Further, under these circumstances, the length of the oscillations became greater and greater, until eventually they threw the patient out of his equilibrium, and he was obliged to sit down. The number of vibrations remained 135 per minute under all circumstances, varying only to the extent of 5 or 6 oscillations above or below that rate.

The tremors of the muscles of the neck and arms, were such as to move the neck backwards and forwards, much the same as in senile tremor, whilst that of the legs was lateral.

The muscles of the larynx were also affected, and gave the patient's voice a peculiar, but uncertain, high pitch. He would begin talking fairly naturally, although always very deliberately, and in a curious manner, cutting words short, or not uttering the end of the word at all; but as he went on speaking, the voice would become "shaky," one word or syllable being uttered in a bass, and the next in a treble key. "There was no tremor of the labial muscles, no difficulty of deglutition, nor nystagmus. Symptoms of serious implication of the spinal cord now developed; for he began suffering from a complexity of clinical manifestations, which appeared to shew that the anterior and posterior grey cornua, and the white matter of the lateral and postero-external columns were condensed, so that he had certain symptoms of adult spinal paralysis (polio-myelitis anterior subacuta), loco-motor ataxia, and LANDRY'S paralysis, besides which, the early signs of lateral sclerosis were fairly pronounced. Patellar tendon reflex, was exaggerated and ankle clonus was present. Rigidity of the muscles alternating with relaxation, was likewise a marked feature. The muscles had undergone considerable diminution in volume, especially those of the legs, the "reaction of degeneration" was present, although by no means so marked as we get it in true essential paralysis, or adult spinal paralysis.

Muscular weakness was marked, and progressive. When lying on his back, all vibrations ceased, but when asked to perform some act which brought certain groups of muscles into action, those groups would vibrate as they would if he had been standing. The electrical reactions of the unaffected muscles were normal. Later on, there was decided increase of the patellar tendon reflex on the left side, and the ankle clonus continued markedly increased, but there was no apparent exaggeration of the superficial reflexes.

The true festinating character of the gait was developed in its entirety, but there is no doubt but that the centre of gravity of the body was displaced, the symptom of retropulsion, or the mode of progressing backwards and threatening to tumble "head over heels" was present. These two symptoms were not manifest however, until the patient was either pushed forwards or backwards, or told to proceed rapidly in either direction. The speech was slow and deliberate. He could not follow a long sentence or question, nor give answers requiring more than three or four words.

The history of the case shews that the slowness of speech did not appear for fully 12 months after the tremor began.

The patient was kept under observation and treatment for a period of four months, during which time his whole condition retrogressed, muscular weakness becoming very evident. By this time it appeared that a partial sclerosis of the whole transverse section of the cord had developed.

Tremor was now much less marked, except when performing some action, but it was present (even) when lying down, ceasing only during sleep. The gait altered somewhat to that of the ataxic character, and the patient could not maintain his equilibrium when placed in the ataxic position, nor walk along a straight line without threatening to fall. In standing, his body bends at an angle of about 30 degrees, the head, shoulders and trunk participating in forming the curved angle. The natural result of this is, that when he attempts to move forwards, the angle is increased, the shoulders are rounded, and the patient looks on the ground as in ataxic progression—the centre of gravity being displaced. When told to walk forwards, he does so with his eyes fixed on the ground in a slow, deliberate way, as if he had to rivet his whole attention upon his progression, and not in a hurried shuffle of the feet, as was the case a few minutes ago. Paresthesia in the form of delayed sensation, acinesia, &c., were now marked.

At this time the speech was slow and drawing. The mental faculties enfeebled, his intelligence being limited to answering the simplest questions, and these only after they were repeated several times. There was no difficulty of hearing nor apparent change in vision, nor were there any ophthalmoscopic pathological signs. ARGYLL-ROBERTSON pupil was absent, nor had there been rheumatism or other pains of the limbs. As already remarked, there was no nystagmus, nor was there any conjugate deviation of the eyes, nor vertigo, which are so common in insular sclerosis. There was well-marked *annulus annulus* with rigid and somewhat tortuous arteries. There were no indications of heart disease of any kind. The face was expressionless. He would remain in bed for several consecutive days without saying a word to any one, not even to the sepoy who was placed over him as sick orderly. He was in no way emotional; could swallow liquids and solids well, and there was no trickling of saliva from the mouth. There was no apparent cause, for the disease no sudden shock, no history of alcoholism, syphilis, &c., except exposure, which developed intense malarial infection.

The man's age is against senile paralysis, and besides it did not begin in the head, nor is the head more affected than the rest of the body.

It is in no way like post-hemiplegic tremor, or post-hemiplegic chorea, which is confined to one side with a history of preceding hemiplegia.

All forms of treatment were tried without avail. Sedatives and nerve-tonics proved useless. He was in hospital for 12 months under a good and liberal diet, cod liver oil, &c., yet no change ensued.

Considering that the case was one of malarial infection, we administered arsenic and quinine systematically for three months, in large doses. At one time he was getting as much as 10 minims of Fowler's solution and 10 grains of quinine three times a day, but without the slightest effect on the

progress of the disease. He likewise got 15 grains of iodide of potassium three times a day, for a month, without any change in the symptoms. It was at first thought that the case was one of disseminated sclerosis, but the tremors are constant and the oscillations very rapid and small, instead of being large or passing through extensive waves; further, the tremors partly ceased or at least lessened during voluntary movements, thus differing from insular sclerosis, in which they are most marked. There is no nystagmus nor is the speech of the "scanning" character.

The slowness of speech and movements, which latterly became well developed, are like those of myxedema, but the main symptoms of that disease are absent; the tremors are regular repetitions of the same movements, the amplitude of each tremor being very limited.

There was a general wasting of the muscles in proportion to the progressive debility of patient.

The disease began in his hands, forearms and arms; it then affected the head. The fingers shewing the usual movements as of 'rolling a pill'. He constantly complained of an "internal heat" and would keep no clothes on.

The patient was profoundly depressed and melancholic, and is said never to have smiled since admission into hospital. He is still very intelligent, sleeps well, except if awakened during the night after which, he finds that he cannot get back to sleep.

There is no difficulty in eating or swallowing. With such highly complicated clinical phenomena, the localization of the seats of the lesions present can scarcely be made with any pretence to accuracy. I would hazard the opinion, however, that this is an instance of the mixed lesions we sometimes come across in chronic cases of malarial infection, arising from partial sclerosis of the whole transverse section of the cord, and partly from a modification in the blood-supply due to the blocking up of the blood-vessels by embolic of pigment, disintegrated malarial plasmodia.

The presence of numerous foreign particles in the blood-vessels may set up a round-celled proliferation and hyperplasia, whilst the partial removal of the blood-supply due to emboli, gives rise to atrophy of the nervous structures involved.

Similar changes may also have gone on in the brain, for a lesion of the cord alone could scarcely be responsible for all the symptoms. It is at once clear that the symptoms correspond with no single disease yet described, but run into, and overlap several maladies due to the implication of different regions of the cord.

HYGIENE IN INDIAN SCHOOLS.

By JOHN MORTON, M.D.

Mussoorie.

A CLEAN school is a model school, and delights the hearts of parents when they come to visit their children or put them to their studies for the first time. It may be said that no greater recommendation can be given to a school than to say it is perfectly clean. And yet in India, where servants are numerous and labor cheap, what little attention is paid to cleanliness! In this term I include every form of sanitation. A good clean school is an index to its tone. One can always tell, judging by this criterion, what

the washing and maimers will be. Whether the masters are gentlemen or otherwise. For it is one of the traits of a modern gentleman to have his person and environments fastidiously clean. To such a one a dusty desk or an improperly tilted black-board, should be as repellent as the sight of a leper. Parents complain a great deal about the uncleanness of schools, but they should not only complain, they should insist on cleanliness in every detail of management. What is it that marks the English public schoolboy as a gentleman wherever he might roam? I unhesitatingly say it is cleanliness. Cleanliness in person, cleanliness in the class-room, in the lavatory, in the latrine, in the dormitory, in food and drink and in clothing, and it will follow in thought, in education, and in the future career of every boy. With this prelude I would draw attention briefly, to a few points which head masters and mistresses should always bear in mind, and be ever ready to carry out without even a suggestion from the medical attendant.

Let us take into consideration first the *ventilation* of a School. Every day a certain amount of fresh air is necessary for the health of its—generally speaking—crowded pupils. The dormitory windows should be opened out immediately the boys or girls leave it, and kept open till an hour or so before sunset. The bedding ought then to be aired by sun light, if there is any during the day, otherwise by being thrown over wire ropes hung in the middle of the rooms. *Rezas* or quilts are an abomination, and no parents should ever be asked to supply them to the boys. Blankets can be washed and aired, and are the only suitable covering in a school. Iron-beds are a *sine qua non*, and *newar* ones are an insanitary sin. White-washing the whole of the buildings at least once a year, is absolutely demanded by the laws of health. Over-crowding will cause boys to be thin and weakly, and will deteriorate the *physique*, and ought on no account to be tolerated. The pillow-cases and bed-sheets require washing once a week, and should never be overlooked in the *dhobies'* list. Leaving the dormitory, let us now walk into the bath-room. It delights the heart of the doctor and the intelligent parent to see it well swept, with a washing-bowl or basin for each boy, clean and laid out in order, and separate towels for each boy hung over another wire rope to dry. Carbolic soap (CALVERT'S) should be in the possession of each pupil. A hot-water apparatus in hill schools should always be kept ready, so that each pupil may have a bath at least twice a week, if not oftener.

The *drainage* of the school is another important matter. Every drain requires daily inspection to prevent its clogging or retaining water of any kind.

The *refectory* should be absolutely without sauce. Dining tables should, once a week, be scrubbed down with sand and hot water, so that bread-crumbs may not enter into the crevices (the natural procreation of Indian-made tables), and decay.

Latrines require tarring frequently, and the disposal of excreta should receive the most careful attention. Separate vessels must be provided for urination. Each boy or girl should pour a scoopful of sand into the vessels after defecation. The filter for drinking water requires to be closed, and each boy should possess a separate

drinking-glass to receive water from the tap. The present system of a tinpot attached to a chain, is a relic of the insanitary age, and should be abolished at once. The food demands a separate man's attention altogether. He is to see that meat and vegetables are fresh, and that the meat is well-nourished and free from disease. The bread requires care in preparation, and the contractor's bakeries ought to be inspected, and the processes of kneading and baking carefully observed. Any filthiness ought at once to be checked. Fruit is necessary for a healthy diet, and should be well washed before being served.

The *Volunteer movement* has done much to inculcate habits of personal cleanliness and care, though it has a few drawbacks. The military exercises train the mind to precision, and the attire to uniformity, but, volunteer camps cause unnecessary fatigue and illness, and head-masters ought certainly to fight against the boys being dragged out for miles and days for these manoeuvres. Each master, before beginning lessons, should inspect the nails and hair of each boy and give marks and prizes to the most sanitary boy at the end of the year. In some schools it is customary to have one comb and hair brush only. This practice is highly reprehensible, and should not be countenanced for a moment. Hair brush factories are numerous and cheap now, and each boy should be the owner of his own brush and comb.

(To be continued).

CREMATION AND BURIAL*

By P. R. HAY JAGANNADHAM, B.A., M.B., C.M., (Edin.)

Khulna.

It is indeed matter for congratulation with the scientific watchman of the signs of the times, in his advocacy on the side of the Torch in the battle between the Torch and the Spade of to-day, to note the fact that the number is increasing and steadily increasing of those "who hail with satisfaction and joy, the prospect that a chariot of fire may receive them and not the cold and darksome grave."

Properly to appreciate the benefits that would result from the adoption of the system of Cremation, it is necessary briefly, to consider the evils for which the system of Inhumation is answerable.

The buried dead have poisoned and still poison the living:—Dr. PARKES of Netley says: "Burying in the ground appears certainly the most insanitary of the three methods—by land: by sea: by fire. The air over cemeteries is constantly contaminated, and water—which may be used for drinking—is often highly impure. Hence in the vicinity of graveyards, two dangers to the population arise; and in addition from time to time the disturbance of an old graveyard has given rise to disease. It is a matter of notoriety that the vicinity of graveyards is unhealthy."

The placing of a dead body in a grave and covering it with a few feet of earth does not prevent the gases generated by decomposition, together with putrescent matters which they hold in suspension from permeating the sur-

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

resisting soil still seeping into the air above and the water beneath, with enormous force is exercised by the gases of decomposition. The layer of earth above the bodies is insufficient to absorb the putrid gases evolved. In 1949 it was calculated that for "the 52,000 annual interments in the City of London, no less than 2,572,800 cubic feet of gas is evolved," the whole of which, beyond what is absorbed by the soil, must pass into the water below, or the atmosphere above.

The vitiation of the atmosphere in the vicinity of graveyards lowers the vital powers, gives rise to low fevers, produces faintness and nausea, headache, diarrhoea, ulcerated sorethroat, disease of the lungs, frightful malignant disease of the throat, dysentery, depression and functional disorders of the nervous system, and malignant fevers. The long duration and frequent fatality of disease in the vicinity of graveyards is well-known. Those living near graveyards "forfeit one-third of the natural duration of life and working activity." PATTENKOFER has found that carbonic acid gas is a pulse-lowering gas. Persons walking past a burying-ground have been taken ill; while grave-diggers have died in entering a grave.

The using of water contaminated by subsoil and subterranean graveyard infiltration, has given rise to low fevers, dysentery, fearful epidemics, cholera and typhus. Such water often possesses a strong odour, marked color and taste, and is found to be loaded with organic matter.

The re-appearance of the plague at Modena, due to excavations made in ground, where three hundred years previously, the victims of the plague had been interred—An immediate outbreak of the disease at Eym in Derbyshire, caused by the digging up of the plague burial-grounds—Enhancement in virulence of the cholera which visited London in 1854, caused by the excavations made for sewers in the site where the victims of the plague of 1665 were buried—The prevalence of the fever in Rome, declared by PLAYFAIR to be due to exhalations from the soil which is saturated with organic matter—The decimation of a town due to the soil of a burial-ground being deposited for manure in many of the gardens in the neighbourhood of the parish church of Minchinhampton—The outbreak of a plague in Egypt traced to the opening of a disused burial-ground near Cairo—The immediate outbreak of small-pox among the workmen who opened a small-pox burial ground one hundred and fifty years old—The outbreak of typhoid fever at a vicarage in Bournemouth—Blood-poisoning in the vicarage of a Hampshire county village—The history of the Aldgate Pump—The breaking out, according to Dr. McEWAN, of pyæmia in the new surgical hospital at Glasgow, which was built over the old burying-ground for cholera patients—St. Margaret's burial-ground near the Houses of Parliament—The Pere-la-Chaise, Montmartre and Montparnasse—A building used as a barrack near a Liverpool Churchyard—The Cimetiere de la Trinite—St. Botolph's Churchyard, Aldgate—Wells near a churchyard at Leicester—Wells below the churchyard of St. Louis in Versailles—Wells of the Place Gambetta below the monumental cemetery of Milan—Water-poisoning due to infiltration from the cemeteries of the hamlets of Rotondella and Bolette—The Cerro de la Concepcion at Valparaiso in Chili—Sir W. Mace's cases

of cholera caused by the opening up of a disused burial-ground in south India, and the spreading of cholera among railway workmen in India, after the funeral service—The Mahomedan cemeteries of Calcutta, which are a series for cholera, fever and dysentery—These are but a few of the many illustrations of the fact that the dead poison the living, which need only to be recalled to carry home a conviction of their truth. Our esteemed President can personally testify to the influence for well of the churchyard around St. George's Cathedral, Madras, and of a cemetery at Mayavaram.

If the physician of the future, the High Priest of the body, is to cease to be a tinker of the human frame, by developing into an officer of health, warding off disease, and annually increasing the percentage per thousand, of the population of centenarians, then in respect to burial he cannot too soon "cease to do evil"; and by adopting cremation, "learn to do well." The "philosopher's stone" and "perpetual motion" have long been the dream of the poet and the enthusiast, and many men, whose lives might otherwise have been useful, have wasted their time in these pursuits, till out of the ashes of failure, hygiene, or public health has arisen as the elixir of life. Burial is a sanitary evil.

Burial is unprofessional and a social sin. It is sinful to lay by poison for posterity, by thus sowing broadcast the seeds of disease and death. The pestilential germs which have destroyed the body are protected and treasured up so as to propagate and multiply, ready to reappear in time and work the ruin of others. The poisons of tubercular disease, anthrax or splenic fever, malarious disease, tetanus, scarlet fever, enteric fever, small-pox, diphtheria, malignant cholera, and yellow fever are all transmissible through the earth from the buried body, by more than one mode. These diseases are all preventible and destined to disappear at some future time. Why lengthen the lease of their life? Putrefaction affecting organic matter, disseminates the germs of fatal disease. "If each corpse is the bearer of millions of millions of organisms that are specifics of ill, what must a cemetery be, in which new foci are forming around each body? In the silence of death these worlds of organisms, invisible to the unassisted eye are laboring incessantly and unperceived, to fill more graves with more bodies destined for their food and for the fatal perpetuation of their species." Why hand down a heredity of preventible disease by preserving the germs which would be destroyed and stamped out by the high temperature required for cremation?

"PASTEUR'S researches on the part earthworms play, in bringing up to the surface of the soil the specific microbes of animals buried several feet deep, favors the above argument. In DARWIN'S paper read at the Geological Society of London in 1887, he proved that in all pasture land, every particle of the superficial layer of earth carrying different kinds of animal life, passed through the intestines of earthworms. The worms swallow earth matter, and after separating the digestible or serviceable portions, they spit the remainder in little mounds or heaps at the mouth of their burrows. In dry weather the water descends to a considerable depth and brings up to the

surface the particles which it ejects. This agency of earthworms is not so trivial as it might at first sight appear. By observations in different fields, Mr. Dawson proved in one case that a depth of more than three inches of this worm-mould had accumulated in fifteen years; and in another; that the earthworms had covered a bed of marl with their mould in eighty years to an average depth of thirteen inches."

"PASTEUR's researches on the etiology of *charbon* show that this earth-mould positively contains the specific germs which propagate the disease, and that the same specific germs are found within the intestines of the worm. The parasitic organism or bacteridium which inoculated from a diseased to a healthy animal, propagates the specific disease, may be destroyed by putrefaction after burial. But before this process has been completed, germs or spores may have been formed which will resist the putrefactive process for many years, and lie in a condition of latent life, like a grain of corn or any flower seed ready to germinate and communicate the specific disease. In a field in the Jura where a diseased cow had been buried two years before, at a depth of nearly seven feet, the surface earth not having been disturbed in the interval, PASTEUR found that the mould contained germs which introduced by inoculation into a guinea-pig, produced *charbon* and death. And further, if a worm be taken from an infected spot, the earth in the alimentary canal of the worm contains these spores or germs of *charbon*, which inoculated, propagate the disease. And the mould deposited on the surface by the worms, when dried into dust, is blown over the grass and plants on which the cattle feed, and may thus spread the disease. After various farming operations of tilling and harvest, PASTEUR has found the germs just over the graves of the diseased cattle, but not to any great distance. After rains or morning dews, the germs of *charbon* with a quantity of other germs were found about the neighbouring plants; and PASTEUR suggests that in cemeteries it is very possible that germs capable of propagating specific diseases of different kinds quite harmless to the earthworm may be carried to the surface of the soil ready to cause disease in the proper animals. The practical inferences in favor of cremation are so strong that in PASTEUR's own words "they need not be enforced."

Burial is uneconomical:—"London was computed by the census of 1871 to contain 3,254,260, of whom 80,430 died within the year. The amount of ashes and bone-earth such as is derived by perfect combustion belonging to, and buried with those persons, is by weight about 206,920 lbs. This bone-earth may be regarded as equivalent to at least six or seven times its weight of dried but unburned bones, as they ordinarily exist in commerce. The amount of other solid matters resolvable by burning into the gaseous food of plants, but rendered unavailable by burial, say for fifty or one hundred years or more, is about 50,564 lbs. The value of foreign bones whose importation was rendered necessary for purposes of manure, into the United Kingdom in consequence of the hoarding of British bones some six feet below the surface, was in:—

| | | |
|------|-----|-----------|
| 1868 | ... | 489,590 |
| 1869 | ... | 600,029 |
| 1871 | ... | 763,185." |

Further, each adult being entitled to four superficial yards of earth, and the common practice being the allotment of a quarter of an acre of burial-ground to each thousand of the population, the amount of waste and unproductive land or lands withdrawn from agriculture and purposes of food-production, and set apart for cometary purposes, is a grave commercial error. A serious consideration in cases of rapidly-growing towns and cities!

The grave is after all but a temporary resting-place. The soil fills with bones, houses crowd around, while the laws allow the re-opening of a grave after fourteen years. "Of 443 burial grounds, the London Metropolitan Public (Garden's) Association converted 116 into Railway lines, docks and streets; while others were converted into private gardens, play-grounds for schools, stone yards, builders' yards, stable yards or vacant building sites, tons of human *debris* being carted away. Thus burial does not, after all, ensure that "sweet sleep, calm rest," which the old prayer that the earth might lie lightly, has associated with the grave.

The horror of putrefaction, "the small cold worm that fretteth the enshrouded form," the notable revelation of horrors in church-yards made in "A Report on a General Scheme for Extra-Mural Sepulture (CLOWES and SONS: 1850)" and "A Special Inquiry into the Practice of Internment in Towns by EDWIN CHADWICK, (London, 1843)" are such as to make the mind revolt from the idea of burial. The books just named are replete with evidence, and should be read by those who possess any sentimental preference for the system of burial.

The statement that belief in the doctrines of the Christian religion necessitates the adoption of the system of burial, has no anchorage in the ocean of truth. Burial is nowhere enjoined in the Scriptures. The Hebrews hid their dead in caves because of the superstition current among them that the soul would revisit the body. MOSES nowhere legislates against cremation. The Rabbis admit that fires were kept burning in the valley of Tophet as a sanitary measure. In the Jewish church on April 10th 1894 we read:—"Cremation is not opposed to Jewish doctrine." The early Christians in consequence of persecution probably adopted the system of burial, because it could be performed in secret. Where but at a crematory can we most appropriately use the time-honored formula, "earth to earth, ashes to ashes?"

As SIR HENRY THOMPSON puts it: "The problem which Nature sets herself to work in disposing of dead animal matter is always one and the same. It may be thus stated. The animal must be resolved into:—

- (a) Carbonic acid (CO_2), water (H_2O), and ammonia (H_2N).
- (b) Mineral constituents, more or less oxidized elements of the earth's structure:—Lime, phosphorus and magnesia.

The first group, gaseous in form, goes into the atmosphere. The second group, ponderous and solid, remains where the body lies until dissolved and washed into the earth by rain. Burial is a contrivance to delay, though it can never prevent, the inevitable change. It does slowly, offensively, and dangerously, what cremation can accomplish in one hour without offence or danger."

Matter is indestructible and eternal. When the animal ceases to breathe, Nature demands the elements of his organism for the nourishing and beautifying of our vegetable progeny. Shall I hide my talent in a napkin and with truant-like reluctance delay in obeying her behests? I would rather joyfully hasten her work and anticipate her designs by gladly yielding up the carbon of my tissues to enter into the structure of the mahogany of a genial host, only in turn when the table becomes too old and is consumed, to enter into the composition of peas and cereals with which "to make glad the hearts" of the guest at another board, thus ever revolving in the harmonious cycle ordained by the Highest Economy.

What then shall we substitute for burial? I answer "cremation;" "cremate." Cremation is to burial, what the surgeon's knife is to gangrene. What Nature attempts to do slowly, imperfectly, and often dangerously, Science does quickly, thoroughly, and harmlessly. Burial is a process which essentially prolongs decay and putrefaction with all its attendant mischief; and the best that can be affirmed of it is, that in the course of many years, it arrives by a process which is antagonistic to the health of survivors, at results similar to, but less complete than cremation produces in an hour without injury to any. Avoiding the horrors of putrefaction and its attendant dangers, cremation arrives at the final constituents of gases and ashes. By burning, we arrive in one or two hours at the very stage of harmless result which burying requires years to produce. An adult body within two hours can be reduced to ashes weighing between three and four pounds. The aim of cremation is to prevent the process of putrefaction.

Fire, and especially the intense heat required for perfect combustion, is an efficient germicide. Cremation wipes out the presence and power of zymotic disease. Can there be a more effective plan for stamping out zymotic and other disease? This is the best treatment of the dead for the sake of the survivors. The land being for the living, not the dead, cremation will prolong life and make it more worth living.

It is economical. At Khulna, East Bengal, six maunds of fuel costing only one rupee eight annas, will completely consume a corpse. MR. FARRIE'S table gives the cost of a Hindoo funeral of the humbler class in the neighborhood of Poona according to COLONEL MARTIN, as twelve rupees seven annas and three pies, figures which appear to me to be rather high. Contrast with these figures, the cost of an ordinary *Christian* funeral in Calcutta! Cremation further frees the land for purposes of agriculture and food production.

The evil that men do, lives after them, the God is oft interred with their bones," sings SHAKESPEARE. This has its literal application in the case of the buried corpse; whereas in cremation, the man "ceases to do evil," and "learns to do well." The gases evolved go to build up vegetable life; while his ashes may manure mother-earth, form a brick or two of a room of his *alma mater*, or may even on occasion, serve as toothpowder to a MARK TWAIN on his travels! The field, however, is the proper destination for the ashes of a crematory.

Nothing is more pure, nothing less suggestive of decay or decomposition than the refined sublimates of a crematorium. No portion of refuse is left. The remains purified by fire and emblematic of a higher translation, may now be returned to the consecrated precincts of a beloved church, and add to the beauty of the edifice by being placed in early Egyptian, archaic Greek, transitional modern Greek, florid, semicircular, early pointed, geometrical, decorated, perpendicular, gothic, or ecclesiastical vases or urns deposited in Columbaria; or ancient crypts, or cloisters, on which the artist and the sculptor have lavished their utmost skill. Sentiment is satisfied. Mark the scene in the play of VIRGINIUS, where the vase containing the ashes of VIRGINIA is placed in the hands of the distracted father by the sorrowing lover! The Campo Santo—The Pyramids—The Castle of St. Angelo—The tomb of Cecilia Meletta—Westminster Abbey—and The Taj Mahal of Agra, are beautiful, suggestive and of historic interest. Why should not classical urns and columbaria attain to the same point of vantage?

Cremation eliminates the danger of premature burial, as in the case of a trance. Not to mention the preceding necessary inspection of the entire body the heat produced would render death instantaneous.

Cremation lends itself readily to the performance of religious and funeral rites.

Exhumation being only necessary to rectify the lack of adequate observation at a more fitting time, a well organised system of cremation will obviate this necessity. By burial, traces of morphia, atropine, aconite, strychnine, and prussic acid are sooner or later destroyed or associated with *ptomaines*, leaving only the metallic poisons, and of these practically only three, namely, arsenic, antimony, and mercury. By the appointment of officers to examine and to certify as to the cause of death, of district medical inspectors, and of a verifying central doctor (*medicin verificateur*) to whom reports of district medical inspectors are forwarded, and in consequence of the facility afforded for conserving at slight cost for years, the stomach and a portion of an internal organ in doubtful cases, the medico-legal objection against cremation resolves itself into an argument in its favor. Safeguarded by precautions, such as the illegalisation of cremation without medical certificate, to prevent the destruction of a body which might have met death by unfair means, there is no method of treatment of the dead which commends itself to my mind as superior to cremation. As Sir HENRY THOMPSON says: "Evil in the shape of disease and death resulting from the present system of burial, is infinitely larger than the evils caused by secret poisoning are or could be."

It would be well, however, till the world is wrought to fellowship with us in our beliefs, for the State to enforce the cremation of each and every body, the life of which has been destroyed by a contagious malady or a zymotic disease. This should be done in the interests of public health, and of generations yet unborn.

In the name of Custom which when noble, is ever elevating, but when foolish, is enslaving, and a fearful drag on individual and race progress. In the name of Sentiment, which the late laureate dignified by raising it into

fellowship with the dead when he says "for heart helps head;" and to which the refined sublimate of Crematory so beautifully lends itself. In the name of Crime, which needs an Argus-eyed detective, and in detecting which the due administration of the regulations, for regulations there must assuredly be, is characteristically capable at a very early stage. In the name of Economy which the Great Teacher impressed upon His followers when he bid them "gather up the fragments that nothing be lost." In the name of Rapidity which is so much needed in these days of varied energy and of keen competition. In the name of Simplicity, which has passed into proverb, "*ars est coelare artem*," the climax of art being the return to natural simplicity. In the name of Decency and Cleanliness, which we all so much admire, as to rank next to Godliness. In the name of Medicine, of which this will be a faithful pillar by securing the production of certificates of the cause of death in every case. In the name of Convenience, the ashes facilitating the payment of a tribute of grateful devotion at the shrine of the loved and lost. In the name of Utility, which directs the wheels of life so markedly that it has been said, and said with much approximation to truth, that "Man is a born Utilitarian." In the name of the Blood-Hounds let loose by war, and of which an ambulance furnace would be a mighty annihilator. In the name of Prophylaxis, which we all do so energetically extol in theory, but unfortunately too feebly practice. In the name of The Bacillary Origin of Disease, and those unseen enemies of ours, which cremation so successfully tackles. In the name of the Ills of Humanity, which are so multiplied, nursed and preserved by the most insensate method of burial. In the name of Fire the emblem of purity and power and the best of servants, which has so much to recommend it. In the name of Civilisation, which appears rotten to the core, and can boast of but an empty name, so long as we sacrifice principle to prejudice by countenancing such revolting results of the system of burial. In the name of Places, which have arisen to a consciousness of the burning importance of the question—and lastly, and as the climax of all, in the name of Sanitation, of which the physician of the future, The High Priest of the human frame, is to be a stern guardian, ceasing to be a "tinker of men's bodies," while he excels in noting and warding off the causes of disease, and in annually increasing the number of centenarians, I would earnestly entreat each member of the profession not to grant the subject of my paper a generous assent out of the amplitude of his philanthropy; but I would rather urge him to regard it as a natural and necessary outcome of scientific conviction, and a by no means unimportant element in the attainment of the climax of sanitary perfection.

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THE SLEEPING SICKNESS OF TROPICAL AFRICA: SYMPTOMS, PATHOLOGY, ETIOLOGY, ANALOGUES AND TREATMENT.

By CHARLES FORBES, M.D., C.M., D.P.H.

THIS peculiar disorder is one of the marvels of West Africa. It has never, as far as I know, affected a European, and is limited to the negro race. Its ultimate tendency is

undoubtedly to death, although apparently, recoveries are recorded. It is certainly commoner among males than females. It may begin to attack the patient at almost any period of life, but is most usually seen in patients between the ages of 12 and 20. The patient succumbs little by little to feelings of somnolence which grow by gradations, gently, into a profound lethargy from which the patient (negro) may at first be roused, but only to sink back again into the same condition, which gradually gets more pronounced. The first perceptible symptom of this disease is a continual and persistent drooping of the eyelids (of man, woman or child) in the daytime, even while working; there is also enlargement of the lymphatic and cervical glands, especially the *glandula conoateata*, soon after the first onset. At this time the negro's health may appear to be quite usual, in spite of which, however, he gives way to fits of sleeping at the most unusual hours. In my opinion this condition should be combated at the very outset by energetic measures of stimulation and purgation; but the negro, though roused from the death-like slumber, is plunged back again into this soporific condition, each period of sleep becoming more protracted; they also slowly increase in number, and the intervals between them gradually grow shorter and shorter. This condition may go on for months, the malady gradually sapping the patient's strength, while at length the negro seems in truth, to be always asleep; his life now resembles that of the vegetable or fungus kingdom. This may last for weeks or months; meanwhile he refuses almost all the food which is offered him, and wastes his very life in sleep. His countenance gradually assumes a shrivelled-up look, progressive atrophy with emaciation sets in, and after a time, death from exhaustion or starvation supervenes at the close of about 3, 6 or 12 months. Here it may be noted that, just before death closes the scene, the inclination to lethargy is not so great, and the intellect seems to clear before the brain ceases to act. It is endemic only in Africa, and in that part which may be geographically described as being situated between the basins of the Senegal and the Congo on the West Coast, especially in the Sierra Leone district, and its Hinterland and the Congo district, where cases are more frequently met with and more virulent in their nature. This complaint occurs more frequently inland than on the coast line. Cases have been seen in the West Indies, &c., but only in negroes who have been transported thither as slaves from Sierra, Leone, Gambia or the Congo.

Pathology.—In considering this difficult and problematical subject: Poisoning by the continual inhibition of the malarial protozoon must be taken into consideration, especially its powerful effects on the neurotrophic system, thereby interfering intimately, by its own presence in the blood-current or by the production of toxins during its life by its own excretions of carbonic acid, &c., or by its breaking up of the red blood-cells and hemoglobin, their coloring into methemoglobin and other bye-products of chemical decomposition, which are at present ill understood. DR. HENRICH says something apropos of this in a paper on "Malarial Malanemias" in the *Indian Medical Gazette*, 7th July 1894, page 247, and states that LAYBURN was the first to notice blood pigment free in the blood of patients suffering from paludism, however "*sed ad rem*," as CROUS says in his

positions when he has digressed from the main point. No matter how it is caused, malarial poisoning has a profound influence for ill on the nutrition of the body. I will now, in a few words, note down the results of a few *post-mortem* examinations on these patients who have fallen victims to its fatal influence. The following morbid changes are visible to the naked eye, *viz.*, hyperæmia of the arachnoid membrane with slight signs of chronic inflammation in the other meninges (*pia and dura mater*). In spite of the above facts, we find no special accumulation or collection of fluid in the ventricles of the brain or external to it in the subarachnoid space, &c. One very noteworthy circumstance is, that the brain substance in every case is somewhat paler than normal, pointing to existent anæmia of the cortical centres. The *spleen* was enlarged in one of my cases, but this was due, I think, to malarial taint. The enlargement of the cervical glands was well marked in every case. There was seen on section of these glands increased formation of connective tissue elements and atrophy of active gland cells. In two cases examination of the blood showed the presence of *filarie sanguinis hominis*—major and minor; but the presence of these parasites must be deemed adventitious, as they occur also in other countries and other diseases. Dr. MANSON reports a case of mummery elephantiasis from the South Sea islands, in whose blood the *filaria nocturna* was present—see *British Medical Journal*, 2nd June 1894, page 1186.

Dr. STEPHEN MACKENZIE showed a patient (see *Lancet*, 22nd November 1890) whose blood, he said, when examined, displayed specimens in number, of *filarie sanguinis hominis*, both diurna and nocturna. Dr. MANSON also discusses this subject further in *Lancet*, 1st October 1892, and again in DAVIDSON'S "Diseases of Warm Climates," 1893."

Cases, however, have been seen and noted in which patients with organic lesions of brain-tissue have seemed to acquire the characteristics of Congo sleeping sickness, as this mysterious disorder has been wrongly termed.

Etiology.—The causative factor or factors of this "marvellous disorder," which is a sort "of death in life," has not yet been satisfactorily established, and so its *defacto* origin appears wrapped up in several obscure problems. Several authors have endeavoured to clear this matter up with the most indifferent and uncertain results. One suggestion was propounded as follows: that it might possibly arise from ingestion of a fungus which grows on certain grains habitually used by the natives as food in the shape of "Kakee," which means bread, &c. However this may be, no proof is forthcoming of its verification. The Gordian knot of the difficulty has not yet been cut, and the problems are still unsolved. Another fact may here be stated is, that neither change of residence or diet suffices to interrupt the steady progress of the symptoms to a fatal issue. The following theories are perhaps the most acceptable from a medical point of view, *viz.*—*Firstly*, that it may be due to a strongly septic condition of the blood, this is partially borne out by the swelling of the glands and degenerative changes taking place in them. *Secondly*—May it be due, as Dr. MACKENZIE seemed to think, to the presence of *filarie sanguinis hominis* of both kinds—nocturna and diurna germs in the blood. There is nothing to prove this

save the fact that these filarious germs have been met with in the blood of perhaps no more than half a dozen patients afflicted with "sleeping sickness." But, at the same time, these parasites have never been reported as found in white men suffering from somnolence, &c., &c.

Thirdly.—It may be a neurosis tending to final establishment of cerebral anæmia, and imperfect nutrition of certain centres, such as the pituitary body, and eventually affecting the trophic system causing somnolence, with ultimate progressive emaciation and death. This latter is my theory, but it is assumption merely and not proven.

Diagnosis should be easy from trance, GAYET'S disease, GERLIEN'S and WERNICKE'S disease and cases of somnolence such as those mentioned by Dr. MILLS in the *Canadian Medical Record*. As sleeping sickness proper, attacks only negroes, but these other complaints are found among white people, and shew a low state with defective intelligence, etc, approaching nearly to the animal kingdom.

Prognosis is very bad, most cases are inevitably fatal, especially those met with around the Congo, and when once the complaint seizes the patient, it tends to be actively progressive in its course (despite the most skilful and energetic treatment), to a fatal termination. Among French medical men in West Africa, GUIRIN reports 148 cases, all of which proved fatal at various periods. GORE'S statistics drawn from Sierra Leone and the neighbourhood, estimate the mortality at about 80 per cent. which is too favorable an average even for that region. Personally I have had experience of only 13 cases treated by myself, eleven of these died between six and 12 months after being seen. Two however survived for a period of 18 months, but whether they afterwards relapsed or not I had no data beyond this point to assist me in determining.

Its Analogues.—I will now draw attention to some rare and curious diseases met with in Europe, but I have no space to discuss them here. I mean (1) GAYET'S disease; (2) GERLIEN'S disease or summer somnolence of Switzerland; (3) cases of lethargy among white people, such as the three reported by Dr. MILLS in the *Canadian Medical Record*. The only points the above diseases have in common with African lethargy, are the somnolent symptoms. (4) WERNICKE'S disease, which shows similar symptoms to the above disorders, and morbid processes producing lesions of the corpora quadrigemina. (5). There is a disease met with at Rio (South America) in which there is a tendency to sleepiness gradually deepening to lethargy or coma due to a septic condition of the blood, but accompanied by pyrexia and secondary changes in the brain. The question to be settled is—Does the blood of these patients contain *filarie sanguinis hominis* or other filarie as in the cases of malignant lymphangitis met with at Rio? If so, this disease would go far to establish the cause of lethargy at Rio if not elsewhere.

Treatment.—This of course, is only tentative and somewhat empiric in its rationale, as we are in the dark as to the true cause of the disease. I will therefore make a brief statement of the remedies which from personal experience of their value, have proved to be the most applicable in all tropical countries and diseases. At the onset administer two compound cathartic pills at bed-time. Repeating the

(2) *What is its pathology?* The pathological fault in diabetes is, as you are aware, that the carbohydrate food, instead of being retained and utilized in the system as in health, runs off the body through the kidneys in the form of sugar. In India is it due to a faulty condition of the liver, or is the lesion to be found in the pancreas? Are Indian physicians ready to accept Dr. PAVY's recently started protoplasmic theory? Might not the facts, that mental worry so frequently acts as an etiological factor in diabetes, and also that tumours and diseases of the brain, punctures of the floor of the fourth ventricle, destruction of the various sympathetic ganglia and section of the anterior cervical nerve roots induce glycosuria, be considered in accepting diabetes either as a brain disease or a neurosis?

(3). Is the disease more prevalent in India than before?

(4). What influence have age, race and profession on the disease?

(5). *Its causes.*—Has it any connection with nervous strain, alcoholic drink, early or excessive sexual indulgence, ingestion of excessive starchy and saccharine food, heavy brain work and bad nourishment, high thinking and free living as opposed to high thinking and plain living? Does gout or gouty diathesis predispose towards the disease? We can understand how in Europe highly nitrogenous food and wine produce gout, and through what organ, and how the pathological process is started, but we are unable to follow how ingestion of carbohydrates and saccharine food in default of well-regulated muscular energy produce diabetes.

(6). *Clinical features.*—Does a case of diabetes run the same course and present the same symptoms in India as in Europe? Do we find here the acute glycosuria in the young and the chronic in those more advanced in life? Do we find in India cases that are of mild glycosuria amenable to modified diet? Are the classical symptoms such as polyuria, thirst, burning sensation of the body, causalgia in the feet always present?

(7). *Diet best suited.*—Is it advisable in a hot country like India to confine the diet entirely to albuminates and fats? A diabetic always retains a certain amount of power to metabolize carbohydrates and utilize sugar, and if these articles of food are entirely cut off, does not his system suffer?

(8). *Prognosis.*—Is diabetes curable? If sugar be detected in the urine, does that life become unfit for insurance?

A printed schedule of questions to be answered by each patient has been prepared by me for the guidance of the physician. I append herewith an analysis of 200 cases:—

1. *Sex.*—Two European patients say that their mothers died of diabetes. I believe diabetes is extremely rare among females in India.

2. *Race.*—My 200 cases are thus classified:—

Europeans, 9; Eurasians, 5; *Hindus*:—Bengalee, 47; Madrassae, 8; N.-W.P., 16; Punjabi, 12; other parts of India, 52; *Muhamedans*:—Bengalee, 9; Panjabi, 13; other parts of India, 22; Sikhs, 2; Parsees, 4; *Christians*:—Bengalee, 5; Madrassae, 1.

3. *Profession.*—The following shows the profession of 200 cases:—

Lawyers (including judicial officers), 43; medical men, 18; school masters, 7; merchants, 12; engineers, 5; retired Government servants, 5; journalists, 2; mariners, 1; soldier, 1; clerks, 15; no profession, 90.

4. *Age.*—In the majority of my cases the age in which the disease was first noticed was between 35 and 55. In India we see a large number of cases of diabetes occurring in old age after 55. These cases usually run a mild course.

5. *Family history.*—Out of 200 cases, 95 give a distinct history of heredity. In 8 cases there is a history of a diabetic brother, but not of diabetic parents. In two cases, mothers died of diabetes.

6. Married 188, unmarried 12. Of the ages at which marriages took place, I find not more than ten under 20.

7. In a large majority of cases, one or two years after the onset of severe symptoms the power of procreation ceased. In mild cases, however, sexual power was unimpaired and semen retained its fructifying virility. One patient says he had 5 children after the onset of the disease, which was by no means a mild attack.

8. Many patients are sedentary in their habits and their number is larger in comparison with those whose habits are active.

9. Intemperate, 4; temperate, 107; total abstainers, 89. It will be seen that total abstainers in India are by no means exempt from the disease.

10. Out of 200 patients, 69 use opium habitually, one of them taking 20 grains daily.

11. In the majority of patients great emaciation and loss of weight followed the disease. In a very few cases no marked emaciation followed. One patient's face and extremities wasted, but his abdomen remained as obese as before.

12. It is to be noted that whenever patients have to perform any extra mental labor, such as writing, the symptoms are always aggravated.

13. Many patients fail to trace the disease to any grave mental anxiety, while 27 attribute their illness to family affliction, grave mental anxiety, or grief, or collapse of a lucrative business.

14. In 2 cases out of 200 there is a history of injury over the head.

15. The majority of patients say that their usual diet before the disease was noticed, was an ordinary mixed one. Twelve patients have always been strict vegetarians. No patient admits that he was exceptionally fond of sugar.

16. Various intercurrent maladies are reported. Acid dyspepsia is a common complaint. Rheumatism, haemorrhoids, phthisis pulmonalis, and chronic bronchial asthma, are other complaints that are found in some diabetics. Twelve patients are subject to malaria, 5 are gouty. Syphilis occurs in 6.

17. In one case the medical attendant says that the disease was first ushered in after a chill following a severe drenching in rain, which threw the whole body in a condition of aches and pains; this, with an unusual desire to urinate frequently and an insatiable thirst with constant dryness of mouth and throat, made the patient seek for medical aid, when sugar in the urine was detected. In one case the disease appeared after an attack of remittent fever, and then became a confirmed malady. In 3, after acute rheumatic fever.

18. Polyuria is almost universally present. It is however conspicuous by its absence in 8 cases. The symptoms

is usually intermittent. One patient says he passes 4 gallons of water daily.

19. The average quantity of sugar estimated is from 8 to 10 per cent. The specific gravity in 9 cases appears to be below 1.020. The highest is 1.050. A trace of albumen is recorded in 12 instances (most of these are patients of old age). The reaction is acid in all cases.

20. Thirst, burning sensation over the body, and sleeplessness are present, more or less almost in every case.

21. Diabetics in India very rarely follow a strict anti-diabetic regimen. In a tropical country it becomes almost impossible to restrict the diet entirely to meat and fat. A Bengalee usually cuts down his rice to a minimum and takes to wheat or bran. A Punjabi leaves off wheat flour and takes to bran. A European begins to take bran bread, but a strictly exclusive diet, as it is understood in Europe, is very seldom adopted in India. Many patients say that bread, wheat or bran, does not agree with them; the former increases thirst and acidity and the latter produces dyspepsia. Several patients speak highly of fruits.

22. Skimmed milk was tried by 185 cases. Two patients speak very highly of it, but from the majority of cases in which it was tried, it appears that beyond assuaging thirst, and perhaps relieving the burning sensations of the body, no other result follows its use. Large quantities appear to act as a flushing agent, just as large quantities of alkaline mineral water do.

23. No drug appears to have any appreciable value in a case of confirmed diabetes. *Opium* has been given a trial by nearly every patient whose history I possess. There are some who speak very highly of it, while others have found no relief. *Codeia*, I find, was tried in 120 cases out of 200, and the result is the same as with opium. *Jambul* has been tried by a large number of patients with no definite result.

In 23 cases *arsenic* was tried with scarcely any appreciable result; temporary benefit was however obtained by the use of the drug. *Alkalies* and alkaline mineral waters are highly spoken of by those who have used them. Bromides of arsenic, soda, potash and lithia, antipyrin, sulphonal, salicylic acid, salol, pancreatic emulsion, and raw pancreas were the other remedial agents tried with scarcely any marked improvement. One patient avers that he derived great benefit from the ash of burnt *sandri* wood.

24. Climate seems to improve the general health, and with such improvement the symptoms usually abate.

In summer a sojourn to a cooler clime proved of great benefit to several patients. Sea air was tried by 4 patients who say that it produced remarkably good results on their general health.

25. Skin diseases, boils, carbuncles and cataract are complications in most cases. Cardiac weakness is complained of in 2 instances. Erythema on hands and feet occurs in 4 cases. One patient has eczema. Constipation is the usual complaint. In 3 cases, oedema of the feet and hands is present.

EMPHYEMA.

No operation is justifiable unless the presence of pus is certain; unless thorough treatment by medicinal agents, blisters, etc., has failed; or unless the symptoms dyspnoea, etc., are so urgent as to demand immediate relief. (And the only way to be sure of the presence of pus is by the use of the aspirating needle).—*ASHMUSSEN*.

A MIRROR OF PRACTICE.

TWO CASES OF SUCCESSFUL OVARIOTOMY.

By EDWARD BARK, C.M.S. (Hyd.),

District Surgeon, Parbhani, Hyderabad, Deccan.

CASE I.—*Ameeoonissa Begum*, *et. 50*, was admitted into the hospital on the morning of the 24th of November with a distended abdomen. The case was diagnosed as one of ovarian dropsy.

At 8-30 A.M. the operation began. The abdominal wall was well washed with carbolic lotion (1—40) and then the patient was put under chloroform. An incision about 1½ inches in length was made in the linea alba, two inches below the umbilicus. The peritoneum having been opened, the cyst was found to be a multilocular one, adherent to the liver and omentum. The fluid (45 pints) was emptied and adhesions carefully freed. A few of the bleeding points were secured by pressure forceps and tied, the pedicle was ligatured with thick silk, and the cystic growth excised. The abdominal cavity was then washed out with a solution of carbolic acid (1—100), the edges of the wound being brought together by horse-hair sutures; lastly, the wound was painted over with antiseptic ointment (2 grs. of double cyanide of mercury to the oz. of collodion).

The patient had been suffering from prolapsus uteri for the last two months, due to the weight of the fluid, but soon after operation the organ was replaced spontaneously.

After operation (11-30 A.M.) the patient was ordered half an ounce of brandy in water, her condition being low.

She was kept on milk and broth throughout. At 1 P.M. the bladder was emptied by a catheter, and at 4 P.M. a turpentine enema (oil of turpentine 5j, warm water, Oj) was given, the bowels acting freely. At 6 P.M. the patient complained of a little abdominal pain and tenderness, and at 9 P.M. she was ordered a pill containing 2 grs. of opium and ½ gr. of extract of belladonna. She slept soundly for four hours.

The next day there was very little abdominal pain, but a troublesome cough set in. The temperature was normal. The turpentine enema was repeated and a pot. iodid mixture given internally. At bed-time an opium pill was administered. From this point, the patient progressed favorably; for her cough, ipecac and morphia lozenges were continued for one week, and the turpentine enema, until 2nd December (8 days). On 4th December the sutures were removed, strips of sticking-plaster being applied across the wound, and the whole secured by means of a binder.

On 10th December the patient, who had not menstruated for the last two years, (*i. e.* since the onset of the disease), began her menses, which ceased on the 18th. She was discharged cured, on 15th December.

Remarks.—(1) The incision was a little less than 1½ inches in length, and though this is far too small, I explored the whole of the abdominal cavity with my index and middle fingers, freeing adhesions as they occurred.

A long incision is undoubtedly more advantageous, but the risks of peritonitis are equally greater.

(2). The wound healed by first intention; the temperature throughout being normal.

(3). I performed this operation, as above, with the assistance of only a compounder and two hospital coolies.

CASE II.—Bhoomalai, *et. 22*, caste Brahmin, states that 24 years ago, she noticed a swelling as big as a hen's egg in her left side (left iliac fossa) accompanied by pain, and that this swelling gradually increased in size. She was partially tapped by one of the military surgeons of Hingoli six months ago, and after tapping, the abdomen contained some bag-like processes. Eight days after tapping it began to enlarge, and within a month it resumed its former size. There was cessation of menstruation at the commencement, but five months after the growth began, till now, menstruation has been regular.

Present condition.—The patient is fairly well nourished; temperature and pulse normal; skin normal; respiration 28 per minute. The heart, liver and kidneys are healthy. In the supine position a roundness is observed, and the surface of the abdomen is uniformly dull, the area of dullness not being altered by position. Fluctuation is limited, and not superficial; there is no oedema of the feet or eyelids. The patient is suffering from chronic bronchitis in addition.

Diagnosis.—The case was diagnosed as an ovarian cyst.

Treatment and progress.—Three days prior to the operation, the patient's bowels were kept open by colocynth pills and turpentine enemata. At 12-45 p.m. her bladder was emptied by a catheter, and exactly at 1 p.m. the operation began.

Description of operation.—The patient's abdomen was well washed with soap and warm water, and then with a solution of carbolic acid (1-40), and antiseptic towels were laid on her thighs and abdomen. She was placed under chloroform, and an incision about 4 inches in length was made in the linea alba from about an inch below the umbilicus. The bleeding was then controlled by pressure forceps and the part well sponged. The peritoneum was then laid open and the cyst discovered to be adherent to it. The fluid was evacuated from the principal cyst, and it was then found that this cyst was also adherent, but to the whole of the abdominal and pelvic walls, extending as high as the liver and spleen: (the uterus, however, was free from adhesions.) These adhesions were carefully freed, and all bleeding stopped. Two other cysts were then emptied out, the pedicle was ligatured with double silk, and the cystic growth delivered. The abdominal cavity was well sponged, and was then washed out with a warm solution of borax, and next with a solution of carbolic acid (1-100). The edges of the wound were brought together by horse-hair sutures, and the wound painted over with antiseptic collodion. At 3-45 p.m. the operation ended.

Description of tumour.—It was a multilocular tumour, semi-solid in nature. The principal cyst contained a thick sanguineous fluid while the smaller ones, a fluid resembling boiled arrowroot; the quantity of fluid removed was 26 pints.

Treatment.—At 5 p.m. the patient vomited and 10 grains of oxalate of cerium were given, which stopped it. At 7 p.m. an enema of turpentine was given, but the water did not return; the patient had a violent cough, and complained

of a little pain in the abdomen; there was no tenderness or puffiness of the abdomen. From 8 to 9 p.m. she slept well. At 10 p.m. 2 grains of opium and 1 grain of the extract of belladonna were given in a pill. She slept till 1 p.m. Four ounces of milk were administered at this hour.

The next day there was only a trifling amount of abdominal pain, but no tenderness. The temperature was 98.2, but her cough was very troublesome. For this an antimony and paregoric mixture were given her. The turpentine enema was repeated, but without effect.

From the 8th January (the second day after operation) onwards until the 11th, the temperature fluctuated between 102.6°F. and 100°F. The cough was very troublesome, and there was a good deal of vomiting, especially at the sight of milk, which was controlled by oxalate of cerium. On the 10th she passed a round worm after the turpentine enema was administered, and thereafter progressed well. One suture was removed on the 11th and two more the next day. The wound discharged somewhat, but healed steadily by granulation, being dressed with carbolic oil. All sutures were removed on the 20th and sticking plaster applied to the wound.

She was discharged cured on the 31st, that is, 25 days after operation.

Remarks.—The adhesions were very extensive and intimate. The tumour was adherent to the whole of the abdominal and pelvic walls, and to the liver and spleen. I ascribe this to the operation of tapping six months previously, and the positive harm that arises from tapping can thus be imagined. There were no posterior adhesions.

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EPITHELIOMA OF PENIS.

By RAI BAHADUR M. N. OHDEKAR, L.M.S.,

Assistant Surgeon, Allahabad.

CASES of epithelioma of the penis are more often met with than they were a few years back. Either the number of cases of this disease are actually increasing, or the increase is only apparent owing to patients availing themselves more largely of the English method of treatment. It is probable that a great many cases in former years died a slow death at their village homes and never applied for that relief which surgery alone held out to them. The disease is more common among the rural population, and is very rarely met with in people of easy circumstances. It is also chiefly found among the Hindus. I have never seen a case among the Mahomedans. The immunity among Mahomedans is, I believe, due to their old custom of circumcision. Want of cleanliness appears to be the chief factor in the causation of this disease.

A few years back only those cases were considered fit for operation in which the disease was either confined to the glans or to the glands and a small portion of the body, and those in which there was no chance of going sufficiently beyond the diseased tissues, and of leaving a stump in front of the scrotum were considered incurable, and sent away. The result of the cases operated on was not very satisfactory, as combination of the medical and surgical generally followed, and recurrence of the disease was far from uncommon. Goorah, however, has introduced a method of operation by which a surgeon can now vary

confidently take in hand cases formerly considered beyond the pale of surgery. The result of the operation is eminently satisfactory, as it enables one to go well beyond the diseased tissues. No urinary troubles follow, there being no danger of contraction of the urethral orifice, and the chances of recurrence of the disease after operation by GOULD's method, are exceptional.

The operation itself is a simple one, and is performed by dividing the scrotum into two halves by an incision running along the centre line and terminating at the perineum, about an inch or an inch and-a-half from the anal orifice. A circular incision is next made round the root of the penis, which is then dissected down to the level of the symphysis. The urethra is next carefully dissected, and a director being passed between it and the corpora cavernosa, it is divided in such a way, that when brought to the lower angle of the incision, it might project about $\frac{1}{4}$ or $\frac{1}{2}$ of an inch beyond the surface of the skin. The penis is now taken hold of and removed with one sweep of the knife on a level with the ascending ramus of the pubis. No retraction takes place, and the hæmorrhage can be controlled by pressure of the thumb, until ligatures are put on.

A question now arises as to whether the testes should be left in or removed. If they are at all enlarged or in any way diseased, or if any portion of the scrotum is also affected with epithelioma, I remove them; but if the skin is healthy and the testes of normal size, I leave them. I am, however, inclined to think that it would be better to remove them and the greater part of the scrotum in every case, as the penis being removed, the testes form a useless encumbrance. All the cases in which I removed them made a more rapid recovery than those in which they were left in. The removal of the testes prolongs the operation, and the decision in each case will depend greatly on the constitution of the patient and his capability to bear the shock of the additional operation.

The bleeding points having been secured, the wound should be carefully washed with an antiseptic lotion, and the urethra secured at its lower angle by means of a couple of catgut or horse-hair sutures. The wound is then dusted with iodoform, a drainage tube laid along the entire length of it, and the edges brought together by horse-hair sutures. Two or three silver-wire sutures may be put in for greater support. The wound heals rapidly, and the result is all that a surgeon can desire.

TWO RARE RECOVERIES IN MIDWIFERY PRACTICE.

By C. A. THORNMAN.

Civil Hospital Assistant, Tellicherry.

CASE I.—A middle aged Hindu female, who had had nine previous normal confinements, took ill this time with *tertius mæri*, after dilatation of the os and rupture of membranes. The labor was prolonged for six days, during which time the village *dhat* attended on the patient.

The village was six miles away from my dispensary, and on arrival at the patient's house, I met satisfaction. The patient was a *shamul*, among Hindus, is the ill vented, small room of her home, stretched on a bare mat

on the damp floor, her body pale, except at the hips, pallid appearance, cold and clammy extremities, imperceptible pulse, quick and gasping respirations, and was almost unconscious.

Some hot milk was at once ordered to be given gently by an assistant, and on examination, the os was found fully dilated, head presenting, with an aperture, and separation of skull-bones, which easily came away piecemeal, as putrefaction had set in at least 24 hours ago. With the blunt hook and a hand in the vagina, the neck and body of the fetus were brought forward, getting the nearest arm out; a great deal of force had to be used in extracting the body owing to its being swollen by putrefaction.

The placenta was *darkish* in color and shrunk. A single, weak antiseptic injection immediately after the operation, and a few doses of quinine and chlorate of potash with stimulants along with a fairly nutritious diet for a few subsequent days, and iron afterwards, effectually brought her round from a moribund state.

CASE II.—A young Hindu female, near the same village, whose first confinement was difficult, and managed by native midwives, and who suffered from vesico-vaginal fistula ever since, was brought with labor pains to the hospital during the eighth month of her second pregnancy, two years after the first; the pains continuing beyond the usual time, without progress of labor.

The Civil Surgeon, assisted by his hospital assistants and a diplomed midwife, found a cartilaginous fibrous band across the os externum, which was divided. Some caloral hydras given, and not seeing the least dilatation of the os after a few hours, though regular pains continued, the cervix feeling cartilaginous, chloroform was administered and five radiating incisions, each an inch long, were made, dividing the cartilaginous portion of the cervix, and the dead fetus was extracted by the foot, the patient making a satisfactory progress in hospital afterwards.

THE CONTAGIOUSNESS OF LEPROSY.

It appears now to be generally admitted by those who have had the greatest experience amongst cases of leprosy, that the disease is distinctly contagious, and that it will in course of years infect a whole district; its progress being so slow, and the period of infection so prolonged that once it has commenced to spread it is almost impossible to predict the ravages which it may commit; and all observers appear to be united in the advice that as soon as a case of leprosy is discovered, it should be firmly and finally isolated, and access from the healthy to the diseased should be rigorously forbidden. It appears to be, in fact, disease dependent rather upon actual contact than any other method of infection. The effects of isolation are beyond all dispute, and in Norway, for example, in twenty years, the number of cases suffering from the disease was reduced from more than 2800 to less than 800 by the compulsory segregation of lepers. It would appear that the disease is increasing in the United States, because it has now been proposed, there, that neglect on the part of a medical man or any relation to report the appearance of leprosy in any person, shall be regarded as a penal offence; that immigrants affected by leprosy should be arranged at the ports of entry and sent home again, and that the Government should establish graded Hospitals where both confirmed, and also suspected cases may be carefully isolated and treated.

OUR PICTURE GALLERY.

RAI TARAPRASANNA ROY BAHADUR, L.M.S.,

F.C.S., F.I.C., F.U.C.,

Chemical Examiner to the Government of India.

By CHUNI LAL BOSE, M.B., F.C.S.

RAI TARAPRASANNA ROY BAHADUR was born in Calcutta, in the year 1844, in the house of his maternal uncle BABU MADEB CHUNDER SEN.

His father, the late BABU SARODA PRASAD ROY, who was an assistant in the Bank of Bengal, belonged to a respectable and well-known Baidya family in Kanohraparah.

Dr. ROY is connected by family ties with several well-known Baidya families related on his mother's side to the Sen family of Oolostolah, the family to which the celebrated KESHUR CHUNDER SEN belonged. Several other members also of this family, though hardly so well-known as KESHUR CHUNDER SEN, were men of considerable merit and acquired positions of trust and responsibility.

Dr. ROY was educated at the Hare School, from which he proceeded in due course to the Calcutta Medical College. His College career lasted the usual period of time, and was of a decidedly brilliant nature; for he won numerous medals and prizes and succeeded in acquiring not only the approbation but also the confidence of the professors. Of this a very signal proof was given by the fact that while still only a senior student, TARAPRASANNA ROY was permitted to act for two months as DR. PARTRIDGE'S House Surgeon in the Medical College Hospital.

Professor BOWEN PARTRIDGE acknowledged his appreciation of young TARAPRASANNA ROY'S work in the following terms:—

"During the time that Babu TARAPRASANNA ROY has acted as assistant in my ward, he has fully maintained the reputation which he had previously earned for himself in the College. As a student, he has been most distinguished, having carried off many of the College prizes, and having in the first examination in Medicine of the Calcutta University, obtained the University scholarship in Physiology and Comparative Anatomy. As my assistant, he has shown that he is not merely a reader but a worker."

At the final examination, which he passed in 1867, DR. TARAPRASANNA ROY stood first. He was awarded University honors in Medicine and obtained thereby a scholarship of Rs. 40 monthly, tenable for two years. After qualifying he entered Government service, and in January 1868 was posted as House Surgeon to the Calcutta Eye Infirmary under Dr. CHARLES MACNAMARA.

After two years' work in the Eye Infirmary he accepted the appointment of Assistant Professor of Chemistry under Dr. F. N. MACNAMARA, who was then Chemical Examiner to Government. This was in 1869, and from that time until his retirement, (due to ill health,) in March 1894—a period of about 24 years—Dr. TARAPRASANNA ROY worked continuously in the Government Analytical Laboratory in Calcutta.

As already stated, his first appointment was that of Assistant Professor; in 1875, he became Assistant Chemical Examiner in addition to his other duties, and in 1876,

Additional Chemical Examiner. This appointment under the title of "Chemical Examiner to Government," he held up to the date of his retirement.

The earlier years of his service were thus associated with the two MACNAMARA'S, for both of whom he has always cherished the greatest admiration and esteem. That these feelings are deep and sincere, any one who talks over old times with Dr. TARAPRASANNA ROY cannot fail to discover, and that the esteem was mutual, will be evident from the following interesting letter written twenty years ago. Dr. C. MACNAMARA thus wrote in 1874:—

"BABU TARAPRASANNA ROY was for some years my assistant at the Calcutta Eye Infirmary, and I formed the very highest opinion of his ability, industry and integrity, in fact I cannot speak too highly of him."

On several occasions, Dr. TARAPRASANNA ROY officiated as Chemical Examiner to Government, and during 1877 acted as Lecturer on Chemistry and Medical Jurisprudence at the Campbell Medical School. He was an Honorary Lecturer on Chemistry to the Indian Association for the Cultivation of Science, and for many years has been Analyst to the Oriental Gas Company, Limited.

In 1884, a medal was awarded to Dr. ROY by the Committee of the International Exhibition held in Calcutta in that year, for the valuable collection of indigenous poisons which he had contributed.

His scientific attainments have, in addition, been recognized by English Chemical societies. For he was elected a Fellow of the Chemical Society, London, and a Fellow of the Chemical Institute of Great Britain. The latter distinction is enjoyed by only a very few of his fellow countrymen. Dr. TARAPRASANNA ROY was also a Fellow of the Calcutta University. In 1889 Dr. ROY'S services were signalized by the distinction of *Rai Bahadur* being conferred upon him.

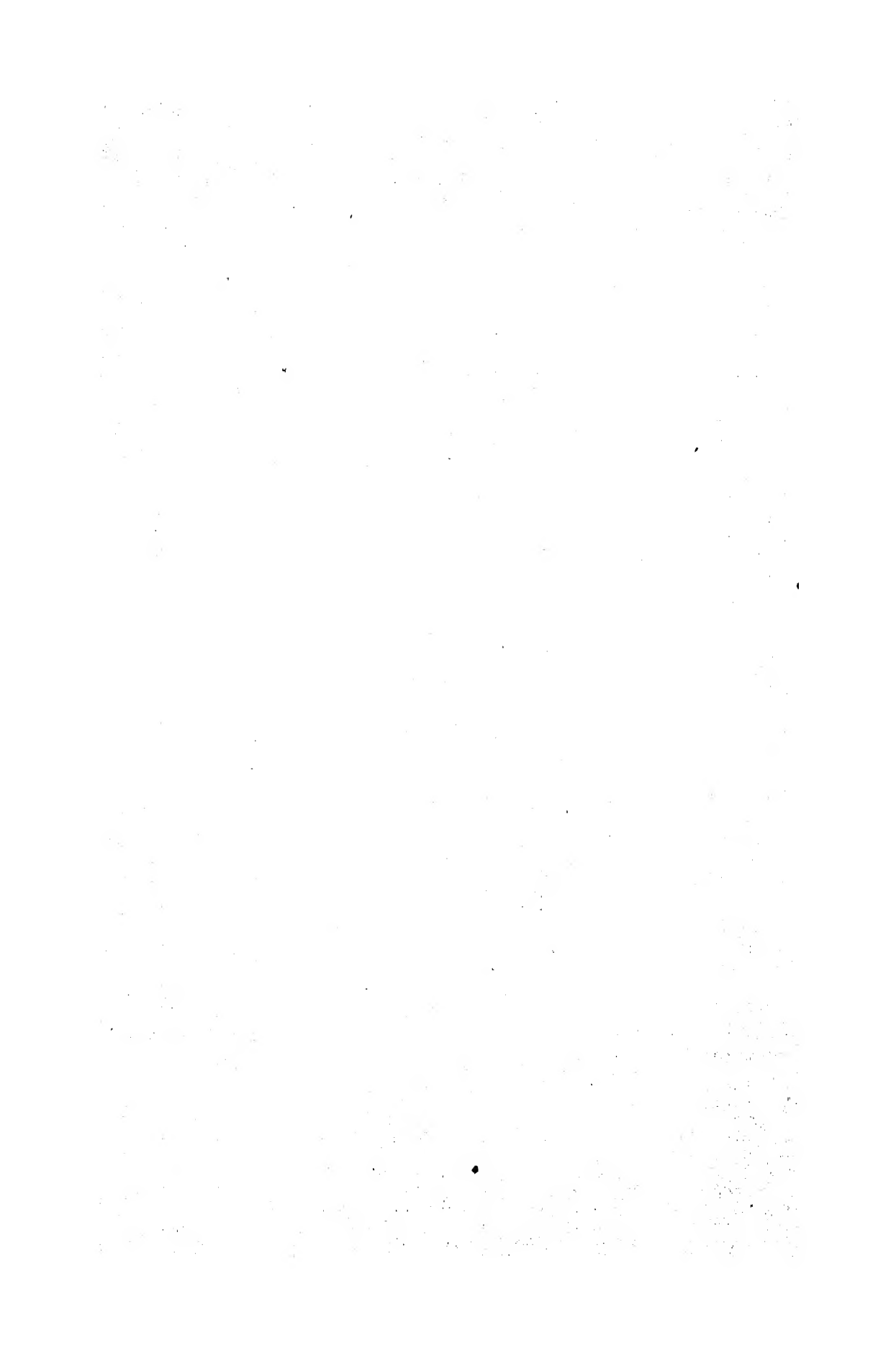
In 1868 the onerous and unhealthy nature of the work which obliged him to pass six hours daily in a vitiated atmosphere, began to tell upon Dr. ROY'S health. He broke down and was obliged to take a year's furlough. Rejoining in 1869, he discharged his duties for the next 5 years, but again became so seriously ill, that he was compelled to retire on pension in March 1894, which, let us hope, he may live to enjoy for many years to come.

HEART FAILURE AND TYPHOID.

THE treatment of the progressively failing heart in typhoid fever should consist of the administration of strychnia in full doses hypodermatically. The use of this drug in medium doses during the early stages of the disease will do much, I believe, to keep up cardiac tone and thus prevent the anæmic condition of the later stages. Alcohol freely used will tide the weakened heart over the interval of severest strain. I think alcoholics should be withheld in the disease until the time of cardiac weakness and then should be given in full doses. Caffeine, camphor and ammonia have their place when stimulation is most necessary. Digitalis is of doubtful benefit to an already overworked heart. Other remedies are sulphuric acid tar and potassium bichromate. The mixing of these substances must, of course, be done cautiously. Pulverize the bichromate, and triturate the tar with it; then gradually add the sulphuric acid, agitating continually with a glass rod, the entire operation being done in a well ventilated place. Let it stand until all reaction is terminated.—*Ballard's Medical Journal.*



Yours sincerely
Napassamashoe



THE Indian Medical Record

1st June, 1895.

THE SERIOUS DEFECTS OF THE STATION HOSPITAL SYSTEM IN INDIA.

It is pleasing to find an officer, whose opinions are entitled to respectful consideration, at last condemning a system which should not have been permitted to have been on its trial half as long as it has been. Brigade-Surgeon HILL-CLIMO, in an article contributed to the *United Service Magazine*, blames, indirectly at least, the station hospital system of medical relief for the European army in India, and for the annually increasing prevalence of enteric fever and mortality therefrom. The station hospital system has had one great fascination—a charm which it appears impossible for the authorities to resist—it is economical compared with the old regimental system, and to this charm principally does it owe, not only its introduction and adoption, but also its fairly long existence. The medical staff, thirsting to exercise military command, and yearning for emancipation from regimental control and authority, painted the system in the most enrapturing colors; the medical staff ever since has adopted it as its own begotten child, and has been ever solicitous to overlook its defects and to blind all others to its shortcomings. DR. HILL-CLIMO looks beyond himself and the convenience of the service to which he belonged; and now that he has retired from the army, points to some disastrous conditions which have resulted from the abolition of the system of appointing medical officers to *regiments*. We do not know why DR. HILL-CLIMO waited until he retired from the service of the State to give the State the benefit of his opinion and experience of the station hospital system, or rather of the abolition of the regimental system. Probably he felt himself gagged while in the service, and had to bottle up all his convictions at any cost. It may be, too, that he hoped that more weight and authority would be given to his utterances if backed by the accumulated personal experience of as many years as possible of "effective" service. Under any circumstances, we are thankful to him for having endeavoured to open the eyes of his medical brethren, who have hitherto continued to be blindly infatuated with a system which removes them from a certain amount of military restraint and disciplinary control. DR. HILL-CLIMO is convinced that the increase from year to year in the admissions and mortality from enteric fever are due to the insanitary condition of our Indian cantonments; that such insanitation has resulted from a want of skilled inspection of regimental lines; and that this last result is the consequence of regiments not having medical officers serving with them. DR. HILL-CLIMO traces this decline in the sanitation of regimental lines to the Afghan War of 1879, when cantonments were fouled by large bodies of troops, transport, and followers passing through them. We feel sure, however, that this fever-prevalence is to be traced back to two or three years before the Afghan War. Fever was distinctly on the increase everywhere in India immediately after the famine of 1877 began. Military cantonments, which

were previously remarkable for their healthiness, grew to be remarkably malarial. The famine of 1877 made the first large contribution of impure air in sanitary surroundings, and fever-causing material, which wars and expeditions have since added materially to. Whatever may be the cause and origin of the deterioration in the sanitary condition of Indian cantonments, the introduction of the station hospital system appears to have been the very worst system that could have been adopted for the removal of the sanitary defects. As DR. CLIMO says: "At the very time that regimental sanitation required strengthening, it was being weakened and rendered less fitted to cope with this new condition of things. With such surroundings were station hospitals introduced, and the last remaining tie which linked medical officers to regiments was entirely severed." Since 1884 the acquaintance of medical officers with corps and *vice versa* have been of the most passing and fitting nature; and the stay of medical officers in stations has been so short, as to make it very improbable for them to detect sanitary defects and impossible for them to see those defects remedied when discovered. It is far from being uncommon now-a-days for members of the medical staff to do duty but for a few days in a station. It is hard to surmise the principles which regulate transfers and postings of these officers; changes and removals have been the *disorder* of years. For a few days there may be found very frequently a great many more surgeons than the station needs, and this condition is very soon followed by a marked dearth of medical officers. These great and frequent fluctuations in the medical establishments of station hospitals lead of course to distributions and re-distributions of wards and patients with very easily conceivable ill-effects on the sick soldier, who may, in the course of a few days, pass through the hands of two, three or even four medical officers, each one probably going over old ground in the treatment of the case. Medical inspections and sanitation receive scant consideration under these unsettled and ever-varying circumstances; and without going the length of saying, that any particular disease or diseases are the direct outcome of these circumstances, we urge that the health and efficiency of the army in general must suffer therefrom. The station hospital system, moreover, leads to most disastrous computations, as calculations are made from very narrow and limited bases. In the matter of the strength of the different grades of the medical service, these falsely economical calculations from restricted data become strikingly and painfully apparent on the smallest military contingency or crisis. Our military medical requirements have evidently been worked out and based on station hospital needs, on which has been provided a small percentage of a reserve for casualties and war emergencies; and that our strength of medical officers and subordinates has been fixed at dangerously low figures becomes quite plain, when the smallest demand is made for medical men. A fearful struggle to perform almost impossibilities is at once observable; and our small medical force is expected to extend itself over any given area without the efficiency of the army being affected. In the smallest campaign or expedition, the medical service is forced to adopt a regular make-shift

policy, almost dividing one station of its lands to provide insufficient aid in another. The health of both medical officers and subordinates has suffered immeasurably by this make-shift policy, and this policy is in a great measure due to the station hospital system of medical relief to our European army. It may be said that an increase of the medical strength will remedy this evil, which can scarcely be admitted into evidence against the station hospital system; but similar defective calculations in respect to other items and matters may also be detectable if the system were impartially scrutinized; and if those defects were remedied, as they should be, both for the efficiency of the service and for the well-being of the British soldier, it is very doubtful if the station hospital system will still retain its charm of economy, which, as we said at the beginning of this article, is what the authorities appear to have been much smitten with in its adoption. Dr. CLIMO says that as a consequence of the new system "there gradually set in a loosening of that union and sympathy which previously existed between regiments and medical officers. Year by year this estrangement increased, and imperceptibly, but not the less disastrously, it was regimental sanitation that felt this pernicious influence." Any impartial observer and enquirer must subscribe to this opinion; and we hope that all those of the medical staff who are similarly convinced will, directly or indirectly, help towards the re-introduction of the old system by which every regiment was an independent and distinct unit in the matter of its medical provision both in times of peace and of war.

:o:

THE UNHYGIENIC GARB OF THE BRITISH SOLDIER IN INDIA.

THERE no doubt were and are, very plausible reasons for the adoption of the style of dress with which our soldiery in general are attired. We see no reason, however, why the martial garb should not undergo modifications in some respects. Indeed, in seriously considering its disadvantages, we think that it is almost the very ideal dress of discomfort; and it is surprising that, in the changes which have from time to time been made, certain positive defects were not long ago removed. "Tightness and stiffness" appear to have been the two most important considerations with the designers of military uniforms; and tightness of dress and stiffness of bearing are the chief characteristics of a son of Mars. Smartness of attire is what military authorities are particularly solicitous about, but in attaining this object many other desirable and more important considerations are sacrificed. Nobody seeing a British soldier "walking out" will feel that his country's defender is at ease "or at home" in his dress. In fact one's feelings are almost akin to pity in contemplating the straight-jacket-like attire to which Tommy is condemned for each period as he may have enlisted. People of both sexes, and men both in and out of our profession, have fought long and well in endeavouring to effect reformation in the nature and details of feminine fashionable attire, which has been freely denounced as disease-begetting, restrictive or suppressive of natural functions, &c.; while our soldiery are compelled to sin hygienically in the matter of dress in much the same respects. It is hard to imagine why the hooked stand-up collar should have such

enforced general adoption, and have for such a long series of years enjoyed the marked favour which it apparently does in the eyes of the military. One would almost think that the discomfort of the arrangement is a dire necessity, and that it has been impossible for human ingenuity to invent any improvement. A detachment on the march gives ample evidence of the discomfort of being buttoned up well nigh to one's chin, for every soldier takes the earliest opportunity when on the move, of unloosening the grip which his tunic collar has of his throat. However well or easy fitting such collars may have been at the time that they received the master-tailor's attention and care, they are certainly not the most comfortable things of their kind; and with the smallest amount of physical development they become a positive nuisance. Even in the looser and easier fitting "khaki" of the latest pattern, there is a perpetuation of the same evil. With regard to the warm and full dress tunics, the stand-up collar must be voted a painful affliction. Not only is the military collar a source of discomfort, but it is also dangerous. Some years ago, a service medical officer pointed out that heart diseases in the army were probably the result, in many instances, of the military style of collars; and one can easily understand how this prolonged pressure on the carotids may cause cardiac affections. The heart must be excited to work more powerfully than natural, in order to overcome the obstruction that is offered to the circulation at the neck, and valvular insufficiencies, hypertrophies, or aneurisms may result. The remarks made by Dr. PARKES in his "Practical Hygiene" on the English soldier's stiff "stock," apply with almost equal force to the tunic collars now in vogue with the military. He says: "It certainly seems wonderful that an apparatus of this kind should have found defenders; for it was not merely uncomfortable, and somewhat impeded the return of blood through the external jugulars, and hindered the action of some of the accessory muscles of respiration, but also rendered impossible the bending and varying attitudes of the neck which occur when a man makes a strong exertion. For great exertion with the upper extremities cannot be made, if the clavicles and scapula are not rigidly fixed; and they cannot be fixed unless the neck can easily bend. On every account, physiological and mechanical, the neck should be left as bare as possible."

The British soldier is too much tightened up in every other portion of his attire, for tunic and trousers alike are so cut that they exercise general undue pressure. In some corps in particular, this closeness of cut is carried to an absurd extent, and the outer garments are made to fit with such ridiculous exactness to figure, as to almost appear as a moulded encasement. Dress of this kind does not allow of the least ventilation, and must cause a dangerous retention of cutaneous exhalations. With a flannel shirt and a close-fitting tunic buttoned up high, one is practically in a hot-pack, which, however valuable in the just and proper application, must be harmful and exhausting in its protracted and unnecessary employment. The overaction of the skin which is excited by the pack-like nature of his dress must increase the soldier's chances of respiratory diseases and disorders due to sudden chills, on his divesting himself of his tunic

immediately on his return to barracks. Then again, it must be remembered; that the action of the lungs, chest walls, and abdominal muscles are restricted and interfered with by the pressure of these close-cut garments; and here again are further objections on physiological grounds to their sanctioned use and enforced adoption. We will again quote from DR. PARKES to shew what are some of the general principles that should be kept in view in designing a good, rational, and comfortable military dress. "Clothing should afford protection from cold or from warmth, without at all interfering with the freest action of muscles or the circulation of the blood, and without pressing on any important part. A good tunic should have a low collar and be loose round the neck, over the shoulder (so as to allow the deltoid and latissimus the most unrestricted play) and across the chest. Looking not only to the comfort of the soldier, but to the work and force required of him, it is a great mistake to have the tunic otherwise than exceedingly loose. A loose tunic, a blouse in fact, is in reality a more soldier-like dress than the tight garment which every one sees must press upon and hinder the rapid action of muscles. The trousers should be very loose over the hips and knees and gathered in at the ankle, so that merely sufficient opening is left to pass the foot through. The trousers at present are made so tight over the hips that to overcome their resistance some force is lost every time the muscles act."

Considering the soldier's dress in the light of the foregoing remarks, it looks as if the authorities have pledged themselves to determined opposition to hygienic and physiological considerations; for, as we have shewn, the soldier's dress offends against these considerations in every way, and is almost exactly the reverse of what it should be. We do not see what objection there can be to the universal adoption of the turned-down or flap collar used by some arms of the service. It is dressy and comfortable, and should commend itself to any one. The more recently introduced style in which the *khaki* tunics are made, may with every benefit be generally adopted in respect to the white and cold weather tunics. It evidently does not seem desirable to the authorities that medical officers should pronounce officially on the style of a soldier's clothing; for in official reports medical officers are required to state simply whether the clothing of the men has been sufficient and suited to the season of the year. We think that if they were asked to report also whether the clothing is in any particular objectionable on hygienic or physiological grounds, the authorities would, from time to time, be furnished with ideas out of which could be evolved a style of dress more rational in every respect than the present.

AGE AND THE MALIGNANCY OF TUMOURS.

EVERY one must first noticed in the breast after the thirty-eight years epoch is, in the great majority of cases, primarily malignant; in the remainder it is certain, sooner or later, to become associated with malignant features in one form or another. From this sweeping rule, the most simple cyst with in the gland parenchyma, or dilated duct, is not exempt.—*Dr. Herbert Swan.*

COMMENTS AND NEWS.

CIVIL APOTHECARIES AND CIVIL ASSISTANT SURGEONS IN MADRAS.

REFERRING to the intended action of the Indian Medical Association on behalf of Civil Apothecaries, a correspondent writes as follows:—

"About the position, &c., of Civil Apothecaries and Civil Assistant Surgeons. These two grades are quite distinct. The strength of the establishment of Civil Assistant Surgeons stands at one for each district and a small percentage for contingencies. This grade was introduced by Surgeon-General CORNISH in 1888 for the purpose of sharing the heavy work of the district medical and sanitary officers, and in order that the head-quarter station of a district may have a well qualified medical man during the absence of the District Surgeon on tour, &c. During these absences of the District Surgeon, the Civil Assistant Surgeon is literally in medical charge, and does all the duties of the District Surgeon. The distribution of the medical and sanitary work of a district between the District Surgeon and Civil Assistant Surgeon is not specifically defined by regulations, and varies in each district. Medical subordinates attached to Local Fund, Municipal or other hospitals at the head-quarters of the districts are of the Hospital Assistant class. Civil Apothecaries are placed in charge of the larger civil hospitals and dispensaries of taluqs (district sub-divisions). In war and other emergencies, when District Surgeons, who are commissioned officers of the I. M. S., are taken for military duty, the Civil Assistant Surgeons act as District Medical and Sanitary Officers; so that, under these circumstances and inasmuch as Civil Assistant Surgeons may have to inspect outlying hospitals, the Civil Apothecary is officially under and subordinate to the Civil Assistant Surgeon. A Civil Assistant Surgeon is a gazetted officer in official language, a Civil Apothecary is not. A Civil Assistant Surgeon must hold at least the L. M. and S. degree, but Civil Apothecaries need not. Their college course is the same as that of W. M. O's. A Civil Apothecary, and for the matter of that, even a Civil Hospital Assistant, may by selection to a certain percentage of vacancies occurring, be transferred to the Civil Assistant Surgeon establishment. Civil Assistant Surgeons then are posted to districts. Civil Apothecaries to individual hospitals and dispensaries of districts.

The pay of Civil Assistant Surgeons ranges from Rs. 100 to 200 after fourteen years with local allowance of Rs. 50; so that they draw from Rs. 150 to 250 per mensem. The increments are septennial. Civil Apothecaries draw from Rs. 50 to 200 after 30 years' service with charge allowances of Rs. 25 and 50 according to years of service. There are something like 150 Civil Apothecaries on the Madras Establishment, but only about 25 Civil Assistant Surgeons. The position of the Civil Apothecary may be said to be one really and officially subordinate to that of the Civil Assistant Surgeon, only that the latter's work lies almost altogether at head-quarter stations, while that of the former is at outlying taluq hospitals and dispensaries. This subordination is not felt by the Civil Apothecary, and the Civil Assistant Surgeon has not many opportunities of exercising his official superiority.

ARGUMENTS FOR AND AGAINST VIVISECTION.

DR. EDWARD HANINGTON, Senior Moderator in Natural Science, Trinity College, Dublin, in a contribution to the *Statesman*, has been at some pains to demolish the arguments in justification of vivisection adduced by Surgeon-Colonel HARVEY in his address at the Indian Medical Congress. DR. HANINGTON considers firstly DR. HARVEY's statement "that the necessity of experiments is recognised

almost without exception by the medical profession." Dr. HANGHTON contends that if experiments are to be regarded as necessary, they must be generally useful and give reliable results. Dr. VAN VYME of Antwerp has, however, stated that he could not base his opinions on these experiments, while Professor GOURS of Strasbourg, a noted vivisectionist, has said in writing of the functions of the brain that his experiments were of no value for the pathology of the human brain. Again several leaders and teachers of medicine are opposed to vivisection, for instance, Sir CHARLES BELL has said that confusion is one of the results of vivisection, and that experiments on animals have never been the means of discovery. Sir THOMAS WATSON said he had no faith in vivisection experiments; Sir WILLIAM FRASER has come to the conclusion that no surgical operation has been initiated by a similar operation performed on lower animals; Sir JAMES PAGET admitted with JOHN HUNTER the danger of arguing from physiology into practical medicine and surgery. All these disprove the general recognition by the profession of the necessity for vivisection.

Considering in the next place the question of cruelty, and taking "cruel" as meaning "devoid of pity, merciless, savage" as defined in CHAMBER'S etymological dictionary, Dr. HANGHTON states that in the appendix to the report of the Royal Commission on vivisection, appointed in 1875, it is shown that dogs were baked alive, boiled alive, and partially flayed alive; that dogs' skulls were bored and corrosive acids injected through the holes, &c. Dr. SCHAFER admits that he never gives anaesthetics to frogs or renders them insensible; and Dr. KLEIN says that he pays no regard at all to the sufferings of the animals. Dr. SCHIFF of Geneva finds it necessary when dogs come into his laboratory, to cut out two of their nerves—the nerves of vocalization, to prevent the inhabitants about being disturbed by their howls during experiments being conducted. CLAUDE BERNARD, a prominent vivisectionist, compares the sufferings of the animals to the tortures of the damned; and MONTAGAZZA endeavoured to produce the greatest amount of pain which the animal could endure while alive.

Dr. HANGHTON objects to the sale and administration to human beings of such alleged antidotes as KOCH'S lymph for tubercular disease, Dr. DOMINGOS FREIRE'S stuff for yellow fever, Dr. FERBAN'S cholera virus, HAFKINE'S inoculation, BEBBING'S antitoxin, &c. He regards all these as poisons, and says that the burning question now in England is "whether we are to be poisoned when we are sick, whether a clean thing can be brought out of an unclean, and whether health is to be best promoted by the erection of poison manufactories or by the well-tried methods of hygiene." With regard to the supposed gains by cerebral localization obtained by these experiments, Dr. HANGHTON says that Dr. CLARKE, considering the statistics of operations and the impossibility of localising most tumours of a kind that ought to be removed, said that "he would rather keep such a tumour (were he the subject of it) than allow his brains to be exploited in the interest of science."

AN EDITOR'S HINTS TO CONTRIBUTORS.

THE Editor of the *Medical News* appears to have had rather a harrowing experience; so much so, that he has found it very necessary in a three-page article to ask his contributors to mind the error of their ways, and to lay down some instructions for their guidance. In the matter of articles sent for publication there is, no doubt, a great deal to cause the Editor of any journal much vexatiousness of spirit, and one must be a little more than human if he does not feel disposed to swear a bit at times.

We heartily sympathise with our contemporary. His experiences of these evil incidents in writing have been an

commonly great and trying. Denouncing the way in which writers have of sending the same articles, or very similar articles, to several journals, our contemporary says: "Do not hesitate to characterise such a proceeding in *damning and plain English*; it is certainly *exemplary* in the extreme. It may be due to gross stupidity, or to flagrant trickery." If contributors can be got to abide by our contemporary's suggestions, a great boon will be conferred on editors in general. These suggestions are: "think well before you write, and have something of value to set forth; put what you have to say succinctly and clearly; do not report *clumsily*, using meaningless scraps and fragments of sentences; pay attention to the proper use of compound words, hyphens, and punctuation marks, &c., avoid 'high falutin' and write as you would speak; be modern and crisp, and do not cling to antiquated usages; write legibly and spell correctly; use good paper and leave a full inch of a margin; let not the lines be too closely written; write on one side only of the paper; do not fold the paper more than twice. Will contributors extend some sympathy to editors exposed to irritation and annoyance from so many sources; and will they give these suggestions their kind and merciful consideration?"

NURSES AND THEIR PROFESSION.

WE gladly condense the opening address delivered by Dr. P. S. DONNELLAN at the Training School for Nurses, Medico-Chirurgical Hospital, Philadelphia, and we hope that those who follow the profession of nursing will lay to heart the excellent advice given them in that address. Dr. DONNELLAN spoke of nursing as one of the noblest occupations of womankind. Every woman, he said, is a nurse, she having at one time or another of her life had charge of some body else, a child or an invalid. History teems with accounts of the heroism, self-sacrifice, and devotion of those noble women, the Sisters of Mercy and of Charity, who for the Glory of God and the honor of their sex, faced death itself in the discharge of their duty. Time was when nursing in Europe and America was a disgrace; and self-made nurses of the SARAH GAMP type were not fictitious beings. Trained nursing has, however, become a medical necessity, and without integrity in nursing the most eminent professional skill is unavailing. The qualities essential in making a good nurse are:—a distinct liking for one's calling; good health, as nursing duties are exhausting to mind and body; personal neatness; good sight and hearing; a good common-school education; and a cheerful disposition. A nurse should never be in a hurry, as bustle and confusion make a patient nervous; she should avoid whispered conversation, as this arouses a patient's suspicion unnecessarily; she should carry out the directions of the doctor to the very letter, never disclosing his motives or methods; she should remember that her duty is to observe facts and not to form opinions; and that "a first-rate nurse only makes a fourth-rate doctor." She should not trust to her memory, but should put down in writing all instructions received, and whatever she may notice or have to report at the physician's next visit. She must not be above doing a certain amount of menial work. Her attitude towards the physician should be characterised by deference and by courtesy, avoiding the extremes of familiarity and servility.

A PUBLIC PROSECUTOR MAKING MISTAKES.

IN a case recently tried before Mr. J. D. ELLY, Police Magistrate of Sankish, the *Prosecutor* made a report, an extract from which runs as follows:—

"*Magistrate*.—Mr. GASTLEY, a friend of Mr. CHERRY, says that this morning he and Mr. CHERRY walked, at about 10 o'clock, to this court; but on the road, Mr. CHERRY was taken ill

and the absence of Dr. WALLACE for medical aid. Dr. WALLACE, after examining him, had certified that he was unable to attend court.

The Public Prosecutor, Babu ANURUPAN SEN, said that as Dr. Wallace was not a Presidency Surgeon, he would require Mr. Gaitley to make sure if Mr. Croft were ill or not.

Mr. GEORGE OAKLEY, on being examined, said that Mr. Croft was suffering severely from gout, and was bed-ridden.

The case was adjourned till the 4th proximo.

The station is ours. We refer to the falsified words emphatically as emphasising a most illegal and unwarrantable act on the part of the Public Prosecutor in this case, which will be brought to the immediate notice of His Honor the Lieutenant-Governor of Bengal. It is perfectly correct that the Government enacts that medical certificates granted to its own servants shall, before they are officially accepted be either signed or countersigned by a Presidency Surgeon. Nowhere, however, in its Rules or Regulations does the Government enact that in Courts of Law certificates shall not be accepted when signed by qualified medical men other than Presidency Surgeons. Such a law would be a most arbitrary and unwarrantable infringement not only of the rights and privileges of independent physicians outside the service of Government, but it would be an unjust interference with the liberty of private persons in the most important and delicate concerns of their daily life. We protest most emphatically against the action of the Public Prosecutor in this case, and have no hesitation in denouncing his conduct as a serious breach of professional etiquette and a dereliction of duty that demands censure at the hands of Government.

NO CHLOROFORM FATALITIES IN INDIA.

As we open our British mail exchanges week after week, we find the ominous heading "MORE CHLOROFORM FATALITIES" in almost every issue of our contemporaries. To physicians and surgeons practising in India, this kind of experience looks very much like "culpable homicide not amounting to murder." For why should surgeons in England "kill" their patients with chloroform while surgeons in India have no fatalities? Surely grave errors in the methods of chloroform administration by surgeons in England. What then is the error? Can it be that a tropical atmosphere or the influence of a tropical climate engenders an immunity to chloroform disasters, for we have no disasters either among European or Indian subjects in India. This can hardly be the case, as immunity from fatality is the invariable experience of chloroform administrations in our *All stations*, where the climate and atmospheric changes are similar to those of Western temperate regions. We are strongly of opinion that an imperfect knowledge of practical chloroformisation is the root of the evil. Throughout India, STRYKE'S method is adopted generally, and it is to the universal acceptance of the principle of this method that protects India from the terrible experience met with in every-day English surgical practice. It is useless to hang upon theories as to "heart failure" and the need for "pulse watching" when such a nightmare of a theory is pregnant with fatal results. Surely the immunity from disaster which attends the practical application of Stryke's method of chloroformisation, should stagger those who cannot realize such immunity from other methods, forcing them into the belief that the continuance of a practice of chloroformisation that is notoriously dangerous and often fatal, is enough to justify an investigation that such conduct is not only imprudent but criminal.

HOW CALCUTTA LIVES.

DURING December last the natural food supply of Calcutta consisted of 8,225 bullocks, 1,366 cows, 4,579 sheep, 1,874 goats and 874 kids, making a total of 30,915 animals slaughtered. Of these, 916 lbs. of meat were condemned and destroyed as being unfit for human food. The other kinds of food confiscated and destroyed consisted of fish, vegetables and fruits, potatoes, grain, sweets, and milk products. From the 125 dispensaries inspected throughout the town only 3 drs. of drugs were confiscated. There were 184 inoculations for cholera performed, only 1 person being a European. In one house 8 members of a family of 9 had been inoculated in March 1903. Cholera broke out in December, with the result that all were decapitated, while one of the 6 non-inoculated members was attacked and died next day. The ratio of male births to female in all Calcutta was as 112:100, while that of male deaths to female was as 136:100 for December last. The ratio of *Christian* births is *twice* was 30.5 *per mille*; of deaths, the largest number occurred between the ages of 20 and 39, (514) and the smallest, between 5 and 9 years (81); of these the ratio per 1,000 was: Christians, 25.2, Hindus, 41.4, Mahomedans, 39.7, and other classes, 45.8.

PROFESSIONAL ADVANCEMENT.

THE *Journal of the American Medical Association* points out that to a large extent a man's standing in his community is "measured by the general standing of his profession; and that of the obligations which a man takes upon himself when he enters a profession. One of the most important is the general advancement of the profession and of its members." This advancement, however, can be best, if not only, effected by a powerful association, having a powerful journal. We commend these remarks to all our readers, and hope that they will see that for their individual interests and the good of their profession it behoves them to help in the growth, development and expansion of our association and its journal by bringing fresh additions into union with us.

THE EFFECT OF A DREAM.

LOVERS of the marvellous have the opportunity of finding a strange coincidence in a story recently told at the coroner's court here. A girl, aged thirteen disappeared from her home; her disposition was taciturn and sulky, which, coupled with her expressed apprehension of water, led to the worst fears being entertained by her parents. Her body was subsequently found in the canal. The aunt of the deceased, hearing that the girl was missing, dreamt that she (the aunt) was walking along the bank of the canal, and while looking into the water saw the face of her niece. The police were asked to drag the canal at the spot indicated in the dream; they did so, and at once found the body. Such was the simple story told at the inquest, a statement which if made in a novel would be ascribed to the powers of the writer's imagination.

PUBLIC LAUNDRIES.

SAYS *Indian Engineering*—We are pleased to observe that the methods and materials employed in the washing of clothes in Calcutta are no longer to be left to the tender mercy of the *dhobi*, unregulated and unsupervised. The proposal inaugurated at a recent municipal meeting that *dhobis* should be established about the town is a commendable one, aiming straight at remedying an evil which recent events have brought into daylight. It is to be hoped that this practical and urgent requirement of a large city will not receive that scant consideration which is the common fate of measures that are the most useful and the most likely to lead to improved public health conditions.

OPIUM SUICIDES.

DR. GREG writes an account of his medical missionary labors in the *Ethiopian*, *Record* and cites one or two interesting cases of suicide by taking opium. The first is that of a woman set. 46, who lost one son by opium, and her only surviving son died suddenly, whereupon she poisoned herself with the drug and sat by the side of her son's dead body near a Buddhist temple to die. Her little daughter remonstrating with her and pleading with her to open her eyes. By means of the stomach pump and strong stimulants to her nostrils, Dr. GREG restored her to life after a hard struggle and much pleading with her friends to be allowed to do so. The second case is that of a young man set. 20, who was stretched out on a mat at the door of a hut situated on the banks of the River *Sangari*, then frozen. He was brought out into an out-house after a long parley and there restored to life. The facility with which opium is obtainable, and suicide being pleasant and painless under its influence, are two factors that bulk largely in causing such frequent suicides by that drug.

A LINK WITH THE PAST.

IN MR. WILLIAM HUNTER BAILLIE, who has just passed away, set. 97 years, we have lost a link with some of the most eminent physicians, anatomists and pathologists of the closing of last century. MR. BAILLIE was the only son of DR. MATTHEW BAILLIE, who was a physician to GEORGE III, and a celebrated physician too, as well as a scientist. His constitution (which was not robust) was ruined by a large practice, which overtaxed his energies (16 hours a day being devoted to seeing patients). He died set. 62, of phthisis, but his sisters AGNES and—JOANNA BAILLIE (dramatist and poet)—lived to 101 and 88 years respectively. MR. WILLIAM HUNTER BAILLIE is named after WILLIAM HUNTER, the celebrated JOHN HUNTER's elder brother—his mother being SOPHIA, daughter of DR. DEMNAN, father to the Lord Chief Justice. MR. BAILLIE was a barrister and led a quiet uneventful life.

ABNORMAL HOT WEATHER IN CALCUTTA.

THE heat in Calcutta during the past fortnight has been abnormally great and excessively trying. On the 19th and 20th May, the thermometer registered 105° in the verandah, 98° in the shade, and 113° in the open air. Numerous deaths have occurred from heat apoplexy, while the course of many simple febrile disorders has been rendered disastrous and fatal by the oppressive atmospheric temperature. Horses have suffered severely, and many have died from apoplexy and heatstroke. The ice supply of Calcutta has proved lamentably insufficient, hence an article that is not a luxury but a necessity, has been placed beyond the reach of the poor, who cannot buy it owing to the high prices now charged for ice.

JAWBREAKING COMPOUNDS.

MUCH as the profession has been growing accustomed to the thundering names given to the more recent synthetic and other remedies and compounds, one may pardonably be a little staggered at the name DIMETHYLKETOHexamethane. This formed the subject of a paper read by DR. STANLEY KIPPING at a meeting of the London Chemical Society in March last. The French, however, are not to be beaten in the matter of pharmacopoeial nomenclature; for among other things they can boast of the "acide anhydrosulfamide-benzolique."

HOW CHOLERA MAY BE STAMPED OUT.

SURGEON-MAJOR HAWWOOD, F.M.S., writes to a local contemporary:—"A paragraph has appeared stating that cholera of a virulent type has broken out in cantonments in Dura-Dura. I have much pleasure in stating to you that we

have not had a single case of cholera at Dura-Dura cantonments since 14th August 1894, on which date the new water-supply from filtering beds at Puka was distributed by stand pipes in the cantonment bazaars and cantonments."

BLACKMAILING.

THE Wabech borough magistrates have had before them a charge against MR. GEORGE BURY of Wabech, house surgeon of the cottage hospital, of assaulting one FANNY MAUD LILLIAN JOHNSON. The examination was very damaging to the complainant, and the case was dismissed after a very brief consultation. MR. BURY is to be congratulated, not on the dismissal of the case, which never assumed a serious aspect as far as he was concerned, but on the manly way in which he met the charge. A medical man deserves the thanks of the profession and of all respectable people for exposing such a case.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue:—

- O. F. Peter Sebastian, Civil Apothecary, M.M.A., Jag-gayapet, Kistna Dist.
- Maung Thein Maung, Hospital Asst., Central Jail Hosp., Rangoon.
- B. V. Narsimangar, Hosp. Asst., Jagalur, Chittaldroog Dist.
- M. Lakshmana Rao, Hosp. Asst., Chellakere, Chittaldroog Dist.
- V. J. Packianathan Nadhar, Hosp. Asst., Hijiyr, Chittaldroog Dist.
- S. Gopalsamy Chetty, Hosp. Asst., Hosadurga, Chittaldroog Dist.
- M. S. Maria Pillay, C.M.S., Molakmuru, Chittaldroog Dist.
- N. Narasimya, Hosp. Asst., Holakere, Chittaldroog Dist.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

SHORT ITEMS.

Dr. Ernest Hart thus charges the Indian Medical Department:—"The official regulations with regard to the prevention of cholera among soldiers are misleading and medieval in their ignorance, and the rules ought to be re-written from beginning to end by some one who understands the elements of the subject."

Surgeon-Major Sir James R. A. Clark, who has retired from the army, was born in 1852, and succeeded his father, the late Sir Andrew Clark, as second baronet in 1893.

The Civil Surgeon of Mysore has called the attention of the Municipality to the immediate necessity for the erection of a suitable building for the exclusive purposes of post-mortem examinations.

Government have ruled that medical pupils of the Agra Medical School are entitled to free quarters or compensation while attached to hospitals, pending their rank as sub-hospital assistants.

In future, Military Medical Officers in permanent civil employ will not be eligible for rewards for posting in large-ages under military rules.

Mrs. B. N. D. Bhargava, and S. B. Bhargava of Bombay
were present at the Primary Examination of the Society of
Scientists of London.

Current Medical Literature.

MEDICINE.

Puerperal Polyn neuritis.

DR. LUNZ of Warsaw has recorded in a recent number of the *Deutsche Medizinische Wochenschrift* an interesting case of this rare and peculiar condition, in which the symptoms differed considerably from those usually recognised. In the usual form there is an isolated neuritis of the upper or lower extremities, while the case here mentioned resembles more closely post-diphtheritic paralysis, inasmuch as difficulty in swallowing and diplopia were present, and also what is rare in diphtheritic paralysis, an affection of the face. With regard to the etiology of the condition, it does not seem to follow only a pathological puerperium. DR. LUNZ believes that cases can be divided into three groups: a pyrenic or septic group, in which the neuritis follows some local infection; a cachectic form, which succeeds grave disturbance of nutrition, such as may be produced by loss of blood, persistent vomiting, &c.; and a third group, in which neither infection nor cachexia can be regarded as the cause, but in which the psychological disturbances which the confinement produces is to be regarded as determining the onset, just as it probably does of the puerperal psychoses which occur without puerperal infection. He urges in conclusion, that obstetricians and psychologists should co-operate to elucidate the obscurities of these important and little understood conditions. —*Lancet*.

Sulphonal Poisoning: Recovery.

BURGEON-CAPTAIN C. BIRT, Army Medical Staff, Bombay, reports in the *B.M.J.*—W. G., aged 14, weighing 28 kilograms, took from 5 to 6 grammes of sulphonal in the form of tablets, which he mistook for harmless lozenges. Two hours later his stomach was artificially emptied. He was then very drowsy, and shortly afterwards fell into a deep sleep, from which, however, he could be partially roused. He remained in a semi-comatose state for twenty-four hours. When he had so far recovered as to be able to answer questions, he complained of headache, insomnia, extreme giddiness, and sleepiness. Two days passed before he could stand. When he attempted to walk he staggered and fell. His attitude and look bore a striking resemblance to the effects of alcoholic intoxication. Giddiness, somnolence, and muscular inco-ordination continued for a week after taking the tablets. The last sign of danger was inability to walk in the dark. His urine was increased in quantity, and was highly specific gravity (1020 to 1025). It contained no albumin, sugar, or albumin of formed elements. The examination of his blood was found to show nothing, as in health. There was no diarrhoea, but the symptoms to

remain separate, as E. SCHAEFER has observed in instances of chronic poisoning with this hypnotic. Constipation was the only disorder noticed in his digestive system. The temperature and pulse remained unaffected."

Alterations of the Urine in Malaria.

FOR LAMBECK related the results of researches which he had made in two cases of malaria. In these cases the elimination of nitrogen was in relation with the elevation of temperature; the proportion of urea and the total quantity of nitrogen were not modified; the elimination of ammonia also was in direct relation to the elevation of temperature; the quantity of urea was augmented, but the relation between the ammonia and the total quantity of nitrogen was normal. During the febrile accession the quantity of phosphates was found diminished; they did not increase until after the access. FREUND had also found a retention of phosphates during the febrile stage in some other infectious diseases.

The elimination of chlorides, contrary to what occurs in other infectious diseases, is enormously increased during the malarial paroxysms; this fact is so characteristic, that the author thinks it may be accorded a real diagnostic value—*Jour. Amer. Med. Assoc.*

**Hereditary Syphilis with Acute Nephritis
in Infancy.**

DR. HOCK reports the case of a child born at term, the mother being a II para who had contracted syphilis during her first pregnancy, and had been delivered in the eighth month of a child which died shortly after. The second infant showed at birth no symptom of the disease, except coryza. At the age of eight weeks he was attacked by erythema, which soon disappeared under the influence of protiodide of mercury, but within three days an edema of the pelvis developed. An examination of the urine showed albumin and numerous casts, as well as red and white globules. Other symptoms of syphilis now appeared, but were controlled by iodide of potassium.

This is the first instance of nephritis occurring so soon after birth.—*Univ. Med. Jour.*

Rhythmic Cough of Nasal Origin.

JOUROUKACHI has reported the case of a woman who came under observation on account of persistent cough, which has been present for five-and-a-half years. At first occurring at considerable intervals, the attacks gradually recurred with greater and greater frequency, every four or five minutes, and causing great fatigue. The cough somewhat resembled the barking of a dog. In the absence of a discoverable lesion a diagnosis of hysteria was made, but, despite all treatment, improvement was not effected. The patient coming under observation a second time, a tumor, which proved to be a lymphadenomæ, 1 inch long and $\frac{3}{4}$ inch thick, was discovered in the naso-pharyngeal space in contact with the vomer. On removal of the neoplasm the cough permanently disappeared. — *Medicine Moderna*.

Management of Mice.

The danger in measles and whooping-cough lies in the complications, e.g., bronchitis and pneumonia, which may be coincident with the eruption on the skin and on the mucous surface of the bronchi and pulmonary vesicles—broncho-pneumonia secondary upon measles or whooping-cough will come either from lack of judicious treatment, or from the complications of the patient. Treatment should consist in keeping the patient in a warm room, and administering repeated full doses of acetate of ammonia, which is stipulated by the laws and destroys the infection—*Compt. in Jour. de Med. de Paris.*

Pro-Tuberculous Albuminuria.

TERRANCE cited a number of cases that led him to believe that some cases of tuberculosis were preceded by the development of albuminuria. The most striking features of this condition observed were its intermittence, with irregularity of recurrence, its occurring most commonly in the morning, and its association with phosphaturia. It alternated with attacks of catarrhal bronchitis or congestive phenomena of varied kind, disappearing with the development of the pulmonary disease. The condition is attributed to renal congestion of toxic origin from the action of the products of the tubercle bacillus.—*Med. News.*

SURGERY.

Ophthalmology in Bengal and Madras.

BRIGADE-SURGEON LIEUTENANT-COLONEL E. F. DRAKE-BROOKMAN, F.R.C.S., I. M. S. (retired), writes to the *British Medical Journal* :—

"I have read with interest the abstract "Of the retrospect of Ophthalmology" read by DR. LAL MADHUB MOOKERJEE, Teacher of Ophthalmology in the Calcutta Medical School, at the recent Indian Medical Congress, and reported in the *British Medical Journal* of 26th January. Without wishing to detract in any way from the honor claimed for the Bengal Presidency as the pioneer in this direction, I wish to state that the so-styled "benighted Presidency"—Madras—should not be lost sight of as having, at an earlier date than that mentioned by DR. LAL MADHUB MOOKERJEE, taken the lead in treating those suffering from diseases of the eye, in regularly appointed hospitals.

In the *Review of the Eye Infirmary, Madras, for the five years ending March 31st, 1882*, drawn up by me at the wish of the Surgeon-General with the Madras Government, I have stated (my information having been obtained from old records in that institution) that :

The eye infirmary was originally founded in July, 1819, by the Honourable Board of Directors in a house known by the name of Compton's Gardens, in the district of Royapettah, under the superintendence of Surgeon R. RICHARDSON. In the June of the following year (1820), for certain reasons, of which there is no record, the present locality (Egmore) was selected; and the former building having been vacated, the hospital was reopened in the premises at present occupied for the purpose, Surgeon RICHARDSON continuing to hold the superintendence of it. The reports submitted to the Board of Directors from time to time, of the working of the hospital, appear to have been of so favorable a character as to induce that body of gentlemen to continue to maintain the hospital; and in order that a suitable successor might be found in the possible absence of the surgeon at any time, Assistant-Surgeon T. M. LANE was appointed as an assistant to this officer in October, 1823.

Further on DR. LAL MADHUB MOOKERJEE says : "For the last thirty years nearly 300 operations have been performed yearly in the Eye Hospital, Medical College." For want of sufficient data, I am unable to give statistics of the operations performed at the sister hospital at Madras for so long a period; but the following figures will be interesting in shewing that for nearly eleven years, ending December 31st, 1891, equally good work has been done at the latter institution.

In my second *Review of the Ophthalmic Hospital, Madras from April 1st, 1851, to December 31st, 1881*, submitted to the Madras Government, I give the yearly figures, which show a total of 12,526 for the eleven years, an average of 1,139 for each year.

If DR. LAL MADHUB MOOKERJEE'S "nearly 300 operations" refer only to cataract extractions of kinds as one

might infer from the context, I would mention that, out of the total of 12,526 operations, 5,533 were performed for removal of cataracts during the eleven years above named, at the Ophthalmic Hospital, Madras.

While dealing with the subject of medical work in Madras, it may not be out of place to mention here two other directions in which Madras has taken a prominent, if not the leading, part: I refer first to female medical education, and second, to the institution of a Chair of Dental Surgery at the Madras Medical College, the appointment of Mr. H. J. GOULD (since retired and now in practice in London), as the first Professor of that subject.

The Surgical effect of Rifle Bullets.

DR. CHRISTIE recounts his experiences among the wounded Chinese in the present war in the East, in the *British Medical Journal*, and emphasizes the differential features of injuries produced by the older large-bore bullets on one hand, and those produced by the modern small-calibre rifles on the other. The rifle in present use in the Japanese army has a calibre of 0.315 of an inch, and projects a copper and nickel-coated bullet, weighing 288 grains, and having a velocity of 1,850 feet per second. Bullets of even smaller calibre than this, *viz.*, of only 0.198 of an inch have produced in the hands of KONKA and HEBLEN better results. The older form of bullets were larger, softer, and of comparatively slow velocity, and produced wounds with which all army surgeons are familiar, *viz.*, the wound of entrance consisted of a broad zone of dead tissue, there was great laceration and splintering of bones in the canal, great explosive action, little hemorrhage, and the exit wound was gaping widely and much torn. The new (mantled) hard bullets of small calibre, high velocity and deep penetration, produced clean-cut wounds, slightly lacerated, with little splintering of bone and less explosive action. But they are prone to bleed readily. Being clean-cut, small, and aseptic, they heal perfectly and rapidly.

At long ranges, towards the end of their flight, these small-calibre bullets are apt to *somersault*, and by striking sideways, often produce much splintering and comminution of bone. *Ricochet* hits often tend to separate the outer shell of copper and nickel and the remaining hollow leaden core being soft, produces very much lacerated wounds, being converted, in fact into the old form of bullet. Wounds of intestines producing minute perforations, offer good results when followed by expeditious laparotomy. Lung wounds also give better results than formerly. The areas of the zones of fire are increased by the use of these small-calibre weapons and render "first aid" in the field very risky from the casualties likely to happen to the personnel of the medical staff, as has been abundantly demonstrated in the late war.

The Treatment of Traumatic Peripheral Neuritis.

M. DELORME presents the following treatment for neuritis: The clatrix is seized between the thumb and forefinger and pressed with great force for several seconds; an interval of a few minutes is then allowed to pass, and the pressure is again applied. Generally one application is sufficient; but in obstinate cases the pressure has to be applied two or three times at intervals of from three to four days.

The results obtained from the application of a method so simple and so easy are said to be excellent. M. DELORME cited eight cases which had come under his observation in which there had been complete recovery.—*Précis Médical.*

Auto-Inoculation of Hard Chancre.

S. NOLIN reports three cases of this kind. In the first the seat of the chancre was on the inner side of the eyelid, which the patient had rubbed continually, a particle of pus having lodged in the conjunctival *sul-de-sac*. In the second case the chancre was inoculated in the right ear-pix, while in the third it occurred in the folds of the prepuce.—*Brit. Med. Jour.*

GYNECOTRIS AND GYNECOLOGY.**The remote effects of the removal of the Uterus and Ovaries.**

Dr. E. W. CUSHING of Boston contributes an article in the *Boston Medical and Surgical Journal* on the above subject, and begins by asserting that where excision of the uterus for fibroids was formerly attended with a mortality of 80 per cent, it is now less than 20 per cent, and the best results give not more than 6 to 10 per cent.

Again, formerly it was considered bold and dangerous surgery to remove the uterus for myomata, but the operation is now as well established as is that of ovariectomy. The consequence of leaving the myomata to grow unchecked is, a train of pressure symptoms on ureters, intestines, &c., together with inflammations and degenerations in the tubes and ovaries. Small fibroids can now be removed so successfully and safely by the operation of vaginal hysterectomy, that it is good surgery to excise them in all cases, and thus prevent any recurrence.

The remote bad effects of *excision uteri* are said to be: insanity, obesity and the loss of sexual desire. Insanity has been known to follow excision in rare cases, but Dr. CUSHING doubts whether sexual desire is totally lost.

Removal of ovaries and tubes is done for suppurative inflammations, chills, &c., where the symptoms are very urgent and death imminent, irrespective of the remote effects, as the patient must be got out of immediate danger.

They are also removed for *cirrhosis*, which produces persistent dysmenorrhœa and at times pus, &c., also for *varicocèle* of the pampiniform plexus, for *epilepsy* and *hystero-epilepsy* occurring during the catamenia, for *insanity*, and lastly for *nyctomania* and *maturation*.

Removal of the appendages is called for to bring on artificial menopause: all the characteristic symptoms, such as flushing, &c., are present. At the same time their removal is very apt to be attended with atrophy of the vagina and genitals in some cases, and also of sexual desire in others, though this is fortunately a very rare occurrence.

Septicæmia following Parturition or Miscarriage.

Dr. D. ROSE advocates in the *New York Medical Journal* a plan of treatment which he has found highly successful and one which he believes to be original.

The patient is drawn to the bed-edge, a bivalve speculum introduced *per vaginam*, and the interior of the uterus thoroughly swabbed out with borated cotton in a long dressing forceps, until the cotton comes away quite clean and odorless. After this, some clean cotton is dipped into a solution of IODIZED PHENOL and the whole interior of the womb completely drenched with it. As a rule, this first application suffices, but if necessary, it may be repeated next day. It causes no pain nor the slightest unpleasant symptoms, and "the rapidity with which involution takes place, is simply marvellous." Cotton is used in preference to the douche, as it will wipe away septic shields which the intra-uterine douche would leave behind; there is again no danger of fluid entering the Fallopian tubes; and further, the accoucheur can accurately tell when the uterus is sweet and aseptic by the odour and appearance of what he gets away, which cannot be done when water is used. This method also obviates many an operation for the repair of old lacerations of the cervix.

Modified Ovariectomy.

Dr. PERRI, at the Hôpital Broca, has modified his ovariectomy for the past two years by only removing the organs when totally diseased. When laparotomy is performed and the ovary drawn out of the abdominal wound, if it is found partly healthy, Dr. PERRI amputates the affected portion, cauterizes

the stump, and sews the end with silk. In cases with small cysts he opens them by touching with a PAQUERLIN's caustery. In one case, in which he operated upon both ovaries, the patient has since borne a child.—*M. T. & Hosp. Gazette.*

Artificial Fecundation.

In discussions on artificial fecundation, the fact is not mentioned that JOHN HUNTER was the first to perform this. He was consulted by a person who expressed great anxiety to have children, but whose urethra opened into the perineum. HUNTER recommended him to inject by syringe, previously warmed, the semen into the vagina, *post coitum*, during the orgasm. In this connection, it is of interest to remember that AVERROES reported a case of a woman "that conceived in a bath, by attracting the sperm of a man admitted to bathe near her." The most striking feature about this last case is its having been admitted by Mohammedan jurists as a precedent.—*Med. Standard.*

Induction of Premature Labor by the Use of Glycerin Bougies.

THEILHABER contributes a description of a method of using glycerin bougies for the induction of premature labor. For two years past PELZER's method of inducing labor by injection of sterilized glycerin between the membranes and the uterine wall has been well known. While it is usually effective in inducing uterine contractions, dangerous results, such as chill, fever, violent vomiting, and evidences of interstitial nephritis or hepatitis are also reported. These seem due to the chemical irritation of the glycerin on the uterine wall, and to its absorption rather than to any osmotic action it may set up between the fluids of the ovum and itself. The hypodermatic injection of glycerin causes hemoglobinuria and interstitial nephritis. The simplest and least hurtful method of applying glycerin to the intra-uterine surface is that of glycerin bougies. These consist of a rounded thin bougie of fish bone, covered with a thin layer of 1 per cent of sublimate collodion. Over this is a mixture of 5-9 per cent. glycerin and gelatin, which, to prevent moulding, is mixed with 2 per cent. tricresol. The bougies are packed in waxed paper that is smeared inside with 3 per cent tricresol vaseline. Besides these, a second sort are prepared which contain as a nucleus a fifteen centimetre fish bone, and are coated with a 7-8 grammes of glycerin and gelatin. One case is narrated of the use of these bougies by the author with excellent results, two bougies being used. How much influence the mere presence of the bougies had upon the case is uncertain, but it is believed that the glycerin greatly hastened the desired result. The small amount of glycerin used could scarcely be productive of danger.—*American Journal of the Medical Sciences.*

Puerperal Eclampsia and its Treatment.

FERRE PAU relates two cases of eclampsia, both of which were treated successfully by hypodermic injections of an 8 per cent. solution of common salt in distilled water. From 200 to 700 grammes were injected at a time by means of DIEULAFOY's apparatus. FERRE observes that "PERRAZ believes that the introduction of a great quantity of saline water increases blood tension, and, in this way, leads to re-establishment of renal secretion," but he himself is inclined to think that the diminution of renal secretion is the result of the eclamptic seizures, and that the introduction of large quantities of water acts as a nervine sedative by diluting the toxic matters in the blood and thus diminishing their power. The suspension of the attacks allows the circulation to recover its balance, and the secretions become re-established; thus, as in FERRE's two cases, the periods of convulsions or partial suppression are succeeded by those of polyuria.—*Med. Chronicle.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Glycosuria in Healthy Subjects.

LISCOMB AND ROGERS found after giving cane sugar to 17 patients (healthy subjects) —

1. *Saccharuria* occurred in all, the dose varying between 50 and 150 grammes. (2). A large excretion of saccharose is always associated with a slight glycosuria. (3). In some cases the smallest dose causing saccharosuria also caused glycosuria to a large extent (88 per cent). Saccharose appears most readily in the urine, then glucose, and then lactose. The fact that in some cases (16 per cent), the smallest dose (100 grammes) of saccharose caused glycosuria to a large extent, proves that we cannot regard glycosuria as a grave lesion of the hepatic cells. — *B. M. J.*

Pathology of Thomsen's Disease.

THIS disease bears a kinship to pseudo-hypertrophic paralysis, and is called after its discoverer's name, but has also been studied by ERB, who termed it "myotonia congenita." The main features of this disease are: increased volume of muscular masses, accompanied by impairment of power; whenever the affected muscles contract they assume a state of tonic spasm. There is increased excitability to faradism and galvanism, and the "reaction of degeneration" is present. The disease is hereditary. DUB. DEJERINE and SOTTAS publish an account of the morbid anatomy as gathered from a patient *et. 32* who came under their observation and had had the disease from infancy (dying 5 years later from acute nephritis). The muscles of the lower extremities and trunk (those used most) were hypertrophied, and when they contracted they became rigid, relaxing again but slowly. Microscopically there is a nuclear overgrowth: the sarcois substance becomes swollen, the fibrillae fused together, and the strie are retained, becoming more prominent than in health. The diameter of the muscular fibres is increased, also the inter-fibrillar protoplasm. In more advanced stages the sarcois substance disintegrates and vacuoles are found between the fibres. There is no hyperplasia of connective tissue, nor any increase of adipose tissue, as in pseudo-hypertrophic paralysis.

Changes in the Blood in Yellow Fever.

DR. JOSEPH JONES of New Orleans notices this subject. The blood undergoes profound changes during the febrile stage, as is evidenced by the livid purplish jaundiced hue of the skin, along with blisters and passive hæmorrhages from slight abrasions and bleeding from the ears, nose, mouth, eyes, gums and gastro-intestinal mucous membranes. DR. JONES thus enumerates the various blood-changes:—(1). The albumen transudes through the excreting structures of the kidneys. (2). The fibrinous element in the blood is so altered that it clots imperfectly, owing to absence of fibrine due to the action of the febrile poison. (3). The red cells are only slightly diminished, but present a peculiar appearance under the microscope. (4). Extractive matters of blood are increased. (5). Also fatty matters. (6). Accumulation of bile in the blood. (7). Accumulation of the urea, phosphoric and sulphuric acid, chloride of sodium and ammon. carb. of the urine. (8). Rapid dissolution of red blood cells when blood is abstracted from the body. (9). Rapid putrefaction of blood when abstracted from living body or from large vessels *post-mortem*. — *Lancet*.

Pathological Identity of the various forms of Acute Septic Inflammations of the Throat.

A DISCUSSION on the above subject was held in which DR. ERIC SIMON contributed a paper. He sought to identify the following acute inflammations of the throat and neck as being different degrees of violence of one and the same disease; viz. of acute oedema of the larynx, catarrhus laryngitis, erysipelas of pharynx and larynx, phlegmon

of pharynx, and laryngeal angina. He sought the reasons for the doing, in spite of absence of any bacteriological evidence. He said that the question of their primary localization and subsequent development depended probably on the pathogenic germs gaining an entrance through accidental breaches in the protecting membranes. That great difficulty existed in registering cases (according to the present terminology), which passed from atrophic inflammation into the purulent forms. He next discussed a principal objection which could be raised against his views. He dealt on the importance of the tonsils forming a natural portal for the entrance of the microbes.

THE PRESIDENT thought that DR. SIMON was instead of advancing, only falling back on the old-fashioned views to which some still adhered. He doubted whether oedema of the larynx was the same thing as erysipelas of the larynx, but the one might develop from the other. He believed that there was a contagious form of catarrhal laryngitis.

DR. DE HAVILLAND HALL said he believed that erysipelas of the larynx, phlegmonous pharyngitis, and angina Ludovici were so similar, that the slight differences in their inception was not a sufficiently weighty reason to render their classification under separate heads. He recorded 7 cases, illustrative of the transmutation of one form into another. He therefore regarded them all as identical, as they presented precisely the same clinical picture.

MR. LOCKWOOD enlarged on the terms "pathological identity." He said there was a great difference between identity of "bacteriological invasion" and "identity of disease." In these inflammations about the throat and neck it was improbable that only a single species of microbes caused them all. For instance, in one case *staphylococcus pyogenes* may be found, while in another, *bacilli* (as in angina Ludovici, as evidenced by the factor, which is always due to a bacillus). Also an acute abscess in the arm may exist, due to *staphylococcus aureus*, and a peritonsillitis might be detected due to the same streptococcus, yet no one would say that the diseases in the arm and peritonsillitis were identical.

DR. SHARKEY agreed with DR. SIMON'S conclusions from a clinical point of view. He quoted 3 cases of angina Ludovici, illustrating the rapidly infective nature of the septic inflammation. They were all cases of acute primary cellulitis of the neck infecting the larynx and producing oedema of epiglottis &c.

MR. BUTLIN said that DR. SIMON'S paper only tended to make "confusion worse confounded," for he had failed to show that the diseases were alike in features, clinical aspect, appearances or pathology. No bacteriological experiments or examination had been made, and as for angina Ludovici, no accurate description of it existed. MCKENZIE had included all the other affections under one head previously, but this one.

MR. HARRISON CRIPPS related 3 cases illustrative of fatal septic cellulitis of the neck following disease (gangrene) in the thumb and face (erysipelas).

Recognition of Tubercle Bacilli in Putrid Meat.

MEAT, when kept in contact with tuberculous spurs in a moist warm atmosphere, becomes putrid in from 2 to 5 days the bacilli being readily recognized. After 10 to 25 days the pus and epithelial cells are no longer recognizable owing to dissolution. In 30 to 40 days the bacilli become granular and are less easily stained. In 40 to 60 days they undergo dissolution and are no longer recognizable. Minute sterile elastic threads are deposited quite early in the process of putrefaction. These threads are possibly caused through the transference of the bacilli into the surrounding medium through the medium and are recognizable thus. — *Transactions R. M. J.*

URBAN AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Slaughtering of Animals for Food.

Dr. DUNN, of the Alexandria Hospital at St. Petersburg, wonders as gross cruelty the methods employed in various abattoirs, and though he does not go the length of administering narcotics or anæsthetics prior to letting out the life-stream, he thinks "sheehita" or the Jewish method of slaughtering by venesection, the last civil and the most rational on chemical, economic and physiological grounds. For animals killed by the Jewish method the pain of the incision is scarcely felt, consciousness is lost in 3 to 5 seconds, 75 per cent. of the blood is lost, rigor state sets in in three or four hours, and in cold climates the meat keeps fresh for 18 days. When death is produced by stunning, the agony lasts for 15 to 20 minutes, loses only 35 per cent. of the blood, rigor mortis is delayed, and the meat will not keep for more than 18 days; when first stunned and the neck vessels afterward divided the animals suffer for a long time, lose 54 per cent. of blood, and the meat keeps fresh for 15 days only.

The Etiology of the Tight Waist.

THE hand of Science falls with a dull uncarnal thud upon the constricted waist of women. It tells why she constricts, and that the purpose from the beginning was an unholy one. The women of Decadent Greece first began it in order to emphasize the proportions of their hips and exaggerate the delusive prominence of the bosom. The simple physiological act of respiration was perverted by the tightened girdle until the act became one of sub-clavicular enticement. In fine, squeezing the waist, brought into lustful prominence the capacity of women for easy reproduction and subsequent plentiful lactation. Hippocrates denounced it in the women of Cps, GALEN reproved the practice, MARTIAL jeered at it, but still the waist was tightened and the double ovoid continued to glide before the ardent gaze of man.

The fact is, then, that women have tightened their girdles not because they wanted to do it, but because men approved of them and desired them the more for it. Why should women, then, be blamed? The practice is admitted unsound by all authorities, from HIPPOCRATES to DIO LEWIS, but men have insisted on it. Let the sanitarian and artist direct their attention, then, to man, the brute, not to woman, his victim. When this carnal but necessary factor in society and dress reform is cured of his evil ways, women will dress as they ought; but not before.—*N. Y. Med. Rec.*

Mind the Whip.

THE resident medical officer of the County Hospital at Durham sends us a note, on a sad accident which has happened before and will happen again—whose infrequency, indeed, strikes us as almost remarkable. The patient, while walking beside a cart with a friend suddenly felt that he had been struck in the eye, intense pain and total blindness being the result. A foreign body in the interior of the globe having been diagnosed, the eyeball was removed, and a knot of whipcord discovered embedded in it. This is an accident against which it would seem impossible to guard, and many of us must shudder to think that it has been no fault of our own or of our cabman that it has not happened to ourselves. In particular is it an accident likely to happen to the rider in hansom, for he cannot see the movements of the driver, which certainly conduce not infrequently to the smart flitting of the face over the face through the open window. From the expected blow, even though the period of possible expectation be of the briefest, the rider of the cab is generally safe, for the first wincing movement is to close the lids. But the rider in hansom gets no warning at all. When we intrude in our mind to estimate the number of people carried in hansom during, say, a

year, and, drawing upon personal experience, credit a large proportion of them with an unexpected stripe from the whip across the face, we wonder that more eyes are not assimilated to the unskilful or careless brandishing of the hansom cabman's whiplash.—*Lancet.*

Deaths from Syphilis.

IT is not altogether without interest, in regard to recent events, to note the ages of those who die of syphilis. According to the last report of the Registrar-General, just issued, 1,180 males died of syphilis in England in 1883. Of these, 928, or 77.9 per cent., were under 5 years of age. During the same period 964 females died of the same disease, of whom 745, or 77.2 per cent., were under 5 years of age. Various as may be the views held regarding the propriety of legislative interference with the propagation of this disease, and as to the efficacy of such means as have hitherto been proposed for that purpose, it is clear that no consideration of the subject can be complete which does not recognize the large comparative incidence of the mortality on the early years of life, the great preponderance with which the punishment falls upon the infants.—*B. M. J.*

Disintegration of Bodies after Interment.

A LECTURE on the above subject was recently delivered by DR. KRATZER, Professor of Forensic Medicine at Graz, at a meeting of the society called "Flame," which advocates the practice of cremation in Austria. The series of changes begins with the distribution of the blood. When the blood is no longer propelled by the action of the heart, it sinks to the dependent parts of the body, following the law of gravitation. The vessels soon become unable to resist the blood pressure, and the consequence is that the blood and the fluids of the tissues become extravasated, elevating the epidermis in blisters, which burst and allow all the fluid to escape. This process takes two months. From the complex molecules composing the human body more simple combinations are gradually formed, and in an early stage, the albuminates give rise to ptomaines, products resembling vegetable poisons. What we term cadaveric poisoning is not caused by the above-mentioned substances, but by living organisms. Many insects, especially flies, assist in the decomposition of the corpse. When one genus of these perishes, a second arrives to continue the work of destruction. First come the muscle destroyers, then the fat destroyers, and finally those that form humus. The soft parts of a full-grown body are decomposed within two years, a space of time which may be prolonged by want of some conditions, such as warmth, moisture, and the access of air. The fluids of the corpse generally suffice to start the decomposition; if they are deficient, the bodies turn to mummies, such as have been found in some graves of Germany and Piedmont, whereas abundance of moisture produces allpocore. Seeing that the same oxidation products (CO_2 , HNO_3 , H_2SO_4) occur in the last stage of decomposition as in combustion, these processes are to be considered as ultimately identical.—*Lancet.*

The Identification of Bloodstains.

THE third volume of *Medico-Legal Studies*, compiled and recently published by the Editor of the *Medico-Legal Journal*, New York, contains an interesting epitome of the present position of our knowledge bearing upon the identification of bloodstains. In regard to chemical tests—the guaiacum test and the production of crystals by the addition of common salt and glacial acetic acid (REICHMANN'S crystals)—it is stated that these several tests, while reliable in determining whether the matter examined contains blood or not, are of no value and throw no light whatever upon the question as to whether it was the blood of man or of animals that was examined. The application of the exceedingly delicate instrument, ROBERT'S spectroscopic apparatus, is next described,

and it is said that by its means the late DR. RICHARDSON of Philadelphia was able to detect the 1,000th part of a grain of blood on an instrument supposed to have been used in a case of suicide. The encasing section, on the value of the microscope in the differentiation of the blood of man and of domestic animals, contains a really valuable collection of material which every medico-legal practitioner would do well to have by him. The illustrations are not a matter for congratulation, but the tables of the micrometric dimensions of the blood corpuscles of mammals are useful. On the whole the conclusion—which is founded upon the evidence of well-known toxicologists like Professor THEODORE WENLEY, Professor REESE, who edited the American edition of TAYLOR'S "Medical Jurisprudence," DR. RICHARDSON of Atlantic City, DR. STEVENSON of Guy's Hospital, and others—appears to be that with a skilled and careful microscopist and a good instrument of high powers, it will generally be possible to distinguish a human bloodstain from that of any of the lower animals with the possible exception, of the guinea-pig and opossum. This subject is, however, one upon which it is well known that there exists a diversity of opinion amongst the leading authorities.

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THERAPEUTICS AND PHARMACOLOGY. *Little known Properties of Chloral.*

DOCTOR HOLSTEIN calls attention to the value of chloral as a relaxant of smooth muscular fibre and a dilator of peripheral vessels. He employs it combined with iodide of sodium or potassium in bronchial asthma and hæmoptysis, where it acts by dilating the peripheral vessels.—CHERNICHEVSKY, HOKITANSKY, PAUL and others have likewise recommended chloral in connection with iodide in doses of two to three grains several times a day, and believe the chloral materially favours the action of the latter.

HOLSTEIN also employs it in minute doses in treating the coldness of feet of the anæmic, chloro-anæmic, and neuro-pathic subjects. He likewise finds it of great service in the chronic constipation of neuroathenics, which is generally so rebellious to treatment. The laxative dose is about one scruple taken before retiring, and its action is in general quite persistent, in some instances lasting several days. Like most drugs prescribed for this symptom, it is only to be employed occasionally, lest a habit be formed.—*Medical Age.*

Chronic Morphinism.

OSTEINER individualizes the treatment of the morphine habit. He suggests beginning with the average daily dose and withdrawing the dose as rapidly as the patient can bear. When the dose has been reduced to a few centigrammes, caution is necessary, as then even a slight reduction is badly borne, and at this stage warm baths of from five to fifteen minutes' duration, followed if necessary by the cold shower or cold pack from one-half to two hours (temperature from 78° to 86°F.), are often of benefit. Alcohol in liberal quantities is often useful.

Regarding cocaine he declares that in treating the morphine habit it has no other use than to modify the symptom, and should only be employed when these become violent, say twenty-four to forty-eight hours after the last dose of morphine—and should always be given by the mouth in doses of three-quarters to one-and-a-half grains, never exceeding seven grains per day. Moreover, this should be steadily reduced, and never continued longer than five or six days. Nutrition must be improved by all possible means. If collapse occurs, morphine must be resorted to. Patients with cardiac trouble should not be subjected to complete withdrawal.—*Med. World.*

Rectal Feeding.

G. STANLEY employs for this purpose the following (with or without peptonization) or milk. Peptonized milk is mixed with

certain proportions of salt, a little oil, solution of gelatin, peptin and water; this is given either daily. To prevent rectal irritation and to insure its being retained, the solution must previously be emptied by enema. If tincture of guaiacum, &c., $\frac{1}{2}$ gr. opium or 5 to 10 drops of laudanum, which are added to each nutrient enema. The diseases for which he recommends them are: hæmorrhage after gastroenteritis, to give the stomach physiological rest from the hyperæmia; peristalsis attending digestion, dilatation of the stomach; excessive vomiting of pregnancy, typhoid, and after abdominal operations. In cholera, tea and alcohol may with advantage be added to the enemata.

Acetanalid as a Surgical Dressing.

IODOFORM, owing to its penetrating odour and toxic properties, has from time to time been inveighed against, whilst mercuric bichloride corrodes instruments. It is now recommended to try acetanalid, (antilebrin) as a substitute. It is colorless, odourless, non-toxic, cheap (about 40 cents or Rs. 1-8 per pound) non-irritant and heals wounds, &c., rapidly. It is 11 times more soluble in hot than cold water, in 5 parts of alcohol, also in ether, chloroform and petroleum oils, and can thus be employed as a dusting powder (alone, or combined with starch or boracic acid), in solution (alcohol and water) as oily lotion (40 grs. to the ounce of liquid petroleum), an ointment (40 grs. to the ounce) and as a colloid (40 grs. to the ounce.) It promotes rapid healing without suppuration, drying up and soothing the parts in amputation wounds, scalds, &c. DR. THOMAS S. K. MORTON of Philadelphia has used it very extensively and successfully in his practice, and recommends its more extended trial generally.

Gout.

BOTH the following formulae gave most gratifying results to author: R *Sulphate of quinine, extract of colchicum, powdered digitalis, powdered squill*, of each 1 grain (0.065 gramme); *glycerin of tragacanth*, q. s. M. ft. pilula. Sig.: Once, twice, or thrice daily, before meals. R *Asparagin, lithii guaiacate*, of each 1½ grains (0.10 gramme). M. ft. pilula. One pill every fourth hour.—R. J. BLACKHAM, *Clinical Journal*.

Good Toast.

Is not easy to make, and yet it is one article of diet which, when made in a tempting way, is very palatable to the invalid. The aim of toasting bread is to drive out all the water in it, which tends to make it hard to digest by a weak stomach, and to give it that crisp, brown appearance. For this reason a thin piece of stale bread should be gradually exposed to a fire not too hot, but at a bright red glow. The bread should be turned over and over, and great care is necessary that it is not burned a black or even too brown, as this thick covering of burned bread keeps in the moisture and defeats the object. The toast should be a chestnut-brown.

Butter on a well-made piece of toast is not too heavy for the invalid's stomach. If the butter be spread on a piece of dark burned toast it is simply coated on the outside and reaches the stomach in lumps, but if the toast has been carefully made and the butter is evenly distributed over the whole surface of the toast, it is very digestible and can be taken with ease. When the toast is ready, it should be served at once and never left flat on a plate, but stood up on edge in a toast rack.—*Popular Health Magazine.*

Vinegar in Vomiting after Chloroform.

DR. WARHOLD has employed vinegar with success in the treatment of vomiting after anaesthesia by chloroform. He damps a cloth with the liquid and places it near the patient's nose, allowing it to remain there until he awakes, he goes longer if something then remains. He warmly recommends its use.—*Med. and Surg. Mag.*

Correspondence.

THE MEDICAL SERVICES OF INDIA AND REFORM.

TO THE EDITOR, "INDIAN MEDICAL RECORD"

Sir,—At a meeting of the Provincial Conference recently held in Bombay, among other delegates who spoke, Dr. K. N. BANADURJI was very warmly received, and proposed that this Conference is of opinion—(1) that the present condition of the higher civil medical service is anomalous, indefensible in principle, injurious in its working, unnecessarily costly; that the hour has arrived when, in the interests of the public, medical science and the profession, as also in the cause of economic administration, the civil medical service of India should be reconstructed on the basis of such service in other civilised countries, wholly detached from and independent of its military service; (2) that the very unsatisfactory position and prospects of Civil Assistant Surgeons and Hospital Assistants compared with those of members of similar standing in other departments of the public service require thorough investigation and redress, and prays that Government will grant, for the purpose, an open inquiry by a mixed Commission of official and non-official members.

He said: Not so long ago when I urged the necessity of this important reform being voiced from the Congress platform, and being made a question more of the people than the profession, the wisdom of this suggestion was doubted in some quarters, mainly, it would seem, from fear of the monopolists securing stronger support from their official friends and patrons by reason of its connection with the Congress movement, which would seem not to command much favor in some official quarters. I say some official quarters, because it would be wrong to say that the whole official world is wholly insensible to the wholesome and helpful influence of Congress deliberations for the better understanding of the wants of the people and the Government of the country. It is true that complaints regarding the evils of the Indian Medical Service monopoly were raised from time to time, but they were invariably silenced by the Government pleading their usual *non possumus* on account of service rules and scheduled appointments. These complaints were, moreover, concerned with educational matters only, and thus touched only a small part of the entire question. And the remedy often suggested of establishing independent colleges could but satisfy in a small degree the requirements of the large and radical reform aimed at in the proposition. The objects of the reform are, as you now know, of equal importance to the people of this country and its government, no less than to its profession of medicine. For though it directly affects the emancipation of the Indian medical profession from the degradation brought on it by the Indian Medical Service monopoly, it aims nevertheless, to advance medical science itself, to enable India to learn her own medicine, to advance the material development of the country, to give the tax-payer, as we shall presently see, a genuine article fully worth the value he pays for it, and, last but not least, to give a substantial measure of relief to Government in their financial embarrassment. These are matters, you will

agree, more of public than professional interest to the country at large, and not only to the three Indian states with medical colleges, and they naturally form its subjects for consideration by our national assemblies. And we cannot but rejoice at the results which only a few meetings of our national assemblies have already worked in the matter of this important question. The educational influence of these deliberations has familiarised the people with the details of the subject, has given form to, and focussed the various defects which the reform aims at removing, and by eliciting the intelligent sympathy and co-operation of the public, helped materially to bring nearer the day for the inauguration of the reform. The various details of the evils of the present constitution of our medical services have so often been placed before the public that it would suffice on this occasion to indicate briefly only the main lines of the reform which we have been urging. A fair field and no favor, and a move with the times would express the sum and substance of our demands. It is possible, as you are aware, for our graduates in all other faculties to rise to the highest positions in the service of the State, be they those of a Law or Arts Professor, or Executive Engineer, or Collector, or Sessions, and even High Court Judge, and that without any training in Europe—a matter reflecting no small credit on the colleges and the system of education that have produced such material for State service. Why, then, should it not be equally so with our medical institutions? If the sister institutions have so creditably done their work, and it is only the medical schools that have failed to show similar results, it must be that the system of medical education, and the interests of medical science have not been entrusted to proper hands. Our present system enjoins that holders of British medical qualifications, most of which are in no way superior to our medical degrees, only if they happen to hold a commission in the army, should monopolise all the important appointments, and, as a natural consequence, our graduates in medicine, however high their qualifications or undoubted their claims to preferment, are compelled to be content with the most subordinate and inadequately paid positions in the service, and live and die Assistant Surgeons on Rs. 200 a month, while the members of the Indian Medical Service are favored with expanding military titles, and composition, military and civil allowances rising from Rs. 500 to Rs. 2,500! It is time such an anomalous and unjust system were abolished. In the name of Christian charity and British fairness, let the system, which is so grossly unfair as to condemn the non-Christian Hospital Assistant to the miserable pittance of Rs. 16 to Rs. 80 and favors his Christian brother of the Apothecary class, who undergoes similar training and faces severe tests for his examinations, with salaries ranging from Rs. 50 odd to Rs. 750 be done away with. Let it be realised that the Civil Medical Department has grown sufficiently to lead an independent life, and to have the right to take its stock from the open market of the profession, and that, other things being equal, it would be to the greater advantage of the country, both as regards economy and material progress, to have scientific of her own. Let not the choice in the equipment of its civil medical service be limited to a class of men

trained and recruited for a military service. Let not expensive military loans be any more forced on the civil department. Let it be realised that these are times for specialisation of functions, and that if science is to be cultivated for its own sake, and for the sake of the people as often avowed by Government, it requires no other qualifications from its votaries than those of merit and special training, and that, therefore, a monopoly system which requires posts to be found for men irrespective of the question of their fitness or merit, and according to which a military medical man is supposed to be fit to take up the most diverse duties at a moment's notice, be they of a professorship in a college, or of special work in a department of science, or of sanitation, or of a political agency, is not only quite out of joint with the progress of the times, but positively mischievous in its working. It was not long before public discussion of the evils of the present system took effect and official apologists not thoroughly saturated with the instincts of monopolists were forced to come out with the confession that the cry for reform had a substantial basis, only it was atrociously loud, and Government were unfortunately bound down by claims of vested rights and service schedules. But not so with some of the monopolists, themselves too far saturated with selfish thoughts to take a charitable view of the progress of science and the claims of professional brethren. These, of course, could not endorse the confession that was put forth on their behalf in the public press. They wanted a perpetuity for their monopoly, and therefore they were anxious to present a different picture altogether. And as they could not, as officials, do so in the public press, they looked round for another outlet for their version, and they hit upon a very clever plan. They held a Congress at Calcutta. They wanted non-official members, of course, for that meant money and something more, for, as the *Calcutta Medical Reporter*, first an enthusiastic supporter of that Congress, lamented, "the non-official members were deluded into attending it, and tacitly countenancing the expression of political utterances tending to their utter detriment." For, what did the President of that Congress, Dr. HARVEY, maintain as regards his men and his monopoly, and also as regards the non-official profession? "As long as the hospitals and medical schools are maintained by Government, it is reasonable that they should be officered by Government servants, and so long as Government continue to get the best men possible by open competition of the severest kind, I fail to see that there is any reason for complaint." The local graduates must, forsooth, remain content with the remnants of private practice and subordinate positions in the service, unless, indeed, they should help Dr. HARVEY to raise millions of rupees, by an increment in the salt tax, or a capitation tax, to provide for them good berths in the new municipal hospitals, or expanded health departments, which Dr. HARVEY conjured up before his mind's eye, as the only possible openings, and the only possible methods of providing them for our graduates. This is superfluous logic and uncommon sense. Does Dr. HARVEY mean that our hospitals and medical schools are not public institutions, raised and maintained by public funds, simply because they are managed by Government, and that the people who

pay for their management, have no voice in the matter of the officering and equipment of these institutions, or that the British Government is but a family of men with a number of cousins and nephews to be provided for with berths in the medical establishment, or that such as don't hold commissions in the army could not be called Government servants? The myth of the "severest competition" of the Indian Medical Service Examination, which many of our plucked students have got through with ease, has been too often exposed to need any further examination. Dr. HARVEY's millennium of expanded health departments with millions of revenue from increased salt tax, or a capitation tax, presents such an excruciatingly grotesque picture that I would not spoil its effect by any attempt at analysis. Of course, the monopolists were too shrewd not to admit the absence of scientific work in India, in spite of their unique opportunities. They admitted it, but not without deploring what they put forward as its cause, *viz.*, overwork. One medical officer, according to them had to do the work of half-a-dozen or more, and they got Mr. EUGENE HART, the editor of the *British Medical Journal*, to join in this chorus. Only Mr. HART did not know the real secret of the matter. The medical officers of the Indian Medical Service have, as their subordinates, men as qualified as themselves to do the work of the departments they are supposed to preside over. The usual routine is that papers are prepared for their signatures by these qualified subordinates, and the chiefs merely, by signing these papers, often take the credit for work, which not only have they not done, but of which they may be, and often are, altogether ignorant. But all the same they get paid for taking such inartistic credit, for they get so much extra for each department in which they sign papers. It would be superhuman, indeed, to be Health Officer, Superintendent of Jail, and several other departments, professor of one or more medical science subjects, and be engaged, practically, all hours of the day, in extensive private practice, and yet this is what happens in the case of the one and the same individual in not a few instances. The official work, perhaps, is done during night hours, for during the day they must compete with the local practitioners and, as often happens in the districts, leave the latter very little to do, so easy are their terms and so vast their opportunities from their official position. It was seriously suggested, moreover, that to enable these officials to attempt scientific work they must be provided with microscopes—why not also with pocket cases, and other requisites?—and coaching and refreshing courses in London every few months. But anything will pass for sense when coming from officials or their patrons and apologists. As soon, however, as Mr. HART began to breathe atmosphere untainted by official cant and prejudice, when he got to a safe distance from the mesmerising official radius, and was able to see things for himself, he saw quite different things, and naturally came to different conclusions, and the later views of this high authority fully and in the most unequivocal manner establish, in all important points, the position which we have taken up, and maintained and afford the most complete vindication of the justice of our complaints and the propriety of our demands, and these

opinions coming from the quarter they do, are entitled to most serious consideration. For what does he say? He condemns the present system as "radically wrong," because it gives the Indian Medical Service men duties for most of which they have no special qualification, and because a system in which "men work their way up by seniority to a position in which they fill the dual capacity of P. M. O. of the Army and Sanitary Commissioner with Government affords no guarantee that they are capable of filling the place of chief sanitary authority. And again men who had learnt their work as army surgeons at Netley, and had no preparation for the diverse duties of the Government medical service in India, could give no better productions than "mere clerk's work." It is no wonder then that India should shew utter destitution of scientific work and observation in spite of vast fields and opportunities. These are the charges against the present system regarding its serious effects on the science and profession of medicines. But Mr. HART goes further and warns the Government and the people of India that the most serious wrong that the present system "of putting men trained to work of one kind to work of quite another kind" is responsible for is, that "measures of vital importance to the health of the community are either neglected or imperfectly carried out." This one single evil of the existing system is enough to make the reform question, which we are now considering, the people's question, and to justify the public to rise up against the system, and call for immediate change. Let us hope that the public meetings which are proposed to be held all over India to voice the demand for a thorough reform of the medical administration of the country will achieve the desired success, and that the profession and the public alike will heartily co-operate to carry out the proposed scheme of securing the sympathy and support of the British public and profession, by personal pleading of our cause before them, by an accredited delegate from India. The reform, in its practical working, offers little or no difficulty, and if dispassionately viewed, it would seem to break the neck of the present system without any sudden and violent effort. Let it be clearly understood, that our civil medical officers are mere loans from the military department, and that, by force of certain schedules, the civil medical department is forced to borrow hands from this particular depôt of the I. M. S. This schedule has no legal or moral basis, for it forms no part of the I. M. S., covenant, which is for military work, and surely the medical institutions, and the various sanitary and scientific departments were not created and developed for the I. M. S. men to sponge on them. Stop then these loans, and let the civil medical service be a distinct service recruited from the open profession of medicine by selection based on merit and special training suited to its diverse requirements. Let each head and specialist of a department be the responsible and trusted adviser of Government in matters germane to his work, as is the case in every civilised country. Let hospital boards of officials and non-officials look after the hospitals and dispensaries. The civil medical service properly constituted by selection from the open profession will not only greatly advance the cause of medical education and science, but will make each district

with a hospital a centre of scientific work, and given permanence and preference to local men, good men will, surely, be attracted to the hospitals, and the knowledge and experience they will acquire will be of great local use. Why should not each hospital centre earn as much renown and shew as much good work under our graduates in the British territories as in Native States, Junagadh, for instance, where one of our local graduates has attained the high position of an authority in a special branch of Surgery? For years past the military members of the I. M. S. have been placed under the authority of the A. M. S. Surgeon-General. So far as the military medical service of India is concerned, there is practically one service under one head, with two branches, one attached to Indian troops, and the other to British troops. Why, then, have two separate enlistments of the A. M. S. and the I. M. S.? Why not have one Royal Medical Service with two branches, with the pay and pension-scale higher for the Indian troops branch than for that attached to the British troops, in consideration of its longer period of service in India. As to the reserve question, there is no reason why the civil Assistant Surgeons should not be utilised in times of war, (as pointed out by the Crawford and Cunningham Committee,) for field service, especially after their distinguished work in some former campaigns. Thus it is clear that the reform not only secures increased efficiency of the civil medical department, the rearing of medical science for its own sake and the emancipation of the medical profession, but enables Government to redeem their pledges in regard to the introduction of Western medical science in India. They have declared that colleges and hospitals have been built at public expense and by private donations for "the cultivation of medical science in the interests of humanity, and for the promotion of the happiness of the people of the country," and "not for any Governmental or executive wants," much less, therefore, as mere depôts or halting-places for unemployed military medical officers. But the reform secures another great object as welcome to the people as to the Government of the country, *viz.*, a substantial saving of some twenty lakhs a year. I will not trouble you with details, but briefly explain it thus:—There are some 370 military loans serving in the civil department. Their rank allowances come to nearly 34 lakhs a year. The replacing of these military loans by men from a reformed civil medical service consisting of the present uncovenanted grade and an improved Assistant Surgeons class, would secure a reduction of at least a third of these 34 lakhs, *i.e.*, some 12 lakhs, the scale of military allowances being a third higher than the average of the civil grade pay. But these 34 lakhs are not the actuals of the expenditure on the civil medical department, for the civil allowances of extras to these military loans cost a fourth more, *i.e.*, some 8 lakhs. The total saving, therefore, would amount to some 20 lakhs, a saving not to be despised in these hard times. That the military article is very costly, and that it would not be difficult to replace him by an equally, if not more genuine, and less expensive article, may be seen from this one fact. Side by side with his military colleagues in one of our medical colleges is working a civil professor of the same qualifications and even of the same race at a salary rising from Rs. 350 to

No. 750 only, the scale of military allowances being Rs. 750 to over Rs. 2,000! This disparity was more than once appealed against, but the Government regretted that as the civil professor was not a military man, they could not give him the allowances fixed for military loans. The resolution I have submitted to you pleads for reform with retrenchment, and increased efficiency. Whenever reforms are urged on Government they usually meet our appeal with a grievance, that they have no funds. But here is a reform which carries with it substantial redress of the standing grievance of Government. It, moreover, enables them to redeem their pledges in the matter of medical education and the introduction of Western medical science and thereby add to the sum of their beneficent work in India.

Yours &c., "TRUTH."

EXTENSION OF THE FIFTY-FIVE YEARS' RULE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—A notification has just been issued by the Government of India, the object of which is to extend the period of service for Warrant Officers in civil employ, in such cases as those in which the needful recommendation is received, beyond the age of fifty-five years. It is not easy to say what motives have actuated the Supreme Government to bring out this order. Is it that they wish to keep down the pension list, and effect a very inconsiderable saving in the Home charges, or are they actuated by a desire simply to benefit the subordinates? If this be the case, it is decidedly a new departure, because up to this time all the sugar and plums thrown out by Government have been intended for the superior and superintending grades; and the claims of the hard-working and meritorious subordinates ignored. It is a pity too, if this is really a waking up on the part of Government as to their duties to this class of servants; that they should have blundered in their first attempt to benefit them. The effect of this order will be to block the flow of promotion indefinitely, and will compel men to serve in beyond the age of fifty-five in order to gain a pension in which they can live in decency and comfort. The action of Government in this case contrasts curiously with what they did some time ago; in regard to the Civil Engineers in the P. W. D. In this case a large number were retired and compensated in order to bring about a flow of promotion; and nothing was said then about the immediate cut to the country or the permanent increase in the home charges brought about by the change. In the case of military subordinates, it is now apparent that instead of encouraging a flow of promotion, it is the intention of Government to block for an indefinite period. Looking at the question from a military point of view, it presents a curious aspect. The question is asked in the case of a man whose service is to be extended, is he physically fit? Fit for what easy and comfortable work in the military or civil branch? No doubt he is—but as each year passes, he is evidently less and less fit for even that; but what about military service? In case of a war breaking out, not one of these men would be found fit to bear the fatigue of any phase whatever of

active service, and would therefore have to be thrown away. So that in case of soldiers they cannot be considered effective after the age of fifty-five. Government might, of course, be very willing to suffer them, in the event of war; the chief points to consider are the hardship inflicted on subordinates by interposing a block to their promotion, and forcing many men to serve on beyond the age of fifty-five to gain a subsistence allowance.

Yours &c., MILLS.

A JUNIOR LECTURESHIP IN THE MADRAS MEDICAL COLLEGE FOR A HOSPITAL ASSISTANT.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I read in the *Record* of the 16th March that the junior lectureship in the Madras Medical College, which has long been held by a Hospital Assistant, is likely to be given away to a member of a higher grade, on the retirement of the present incumbent; if the rumour proves to be true, the action of the authorities in power is very unjust to the already overworked and underpaid Hospital Assistants. In connection with this subject I beg to mention that originally there was only one Hospital Assistant, holding a junior lectureship in the Medical College, and that sometime afterwards, owing to increased work, another Hospital Assistant was added to the staff. The latter, on passing the L.M.S. degree, was promoted to the grade of Civil Apothecary a couple of years ago, so it will be seen that, instead of two Hospital Assistants there is only one now. The Government would have done simple justice to the Hospital Assistants if they had given the post of the L.M.S. Hospital Assistant (now promoted) to another Hospital Assistant, on the promotion of the former to a higher grade. Now if the Government again intends giving away the other only remaining appointment to a man of higher grade, that will be mere injustice. Of course there will be available many candidates holding L.M.S. or M.B. degrees for the post of a lectureship in the College outside the department. But the disposing of the only prize set apart for Hospital Assistants, in this manner will throw dust into the eyes of the deserving Hospital Assistants, who by being members of their grade, aspire to such an appointment.

It is known that Hospital Assistants cannot expect to rise in the service, unless they pass the L.M.S. Examination, and that the rules of the department are so very strict and stringent that they cannot ever dream of passing the same. Among Hospital Assistants, there are several deserving men who are matriculates, medicalists, and who have won prizes and certificates of honor. Any one who is considered the best fitted should be appointed to the post, and the Government would do more justice by thus reserving the post for a Hospital Assistant.

I beg you to kindly insert this letter in your valuable journal, and also help if necessary, by interceding on the behalf to the Local Government, before the matter is finally disposed of.

Yours &c., C. H. A.

KOLATAUR, 22nd April 1888.

THE SUBJECTS OF AN OBSTETRIC EXAMINATION.

To the Editor, "INDIAN MEDICAL RECORD."

Sir,—Kindly oblige by letting me know (1) if it is not the understood rule that the husband retires from the room while the wife is professionally examined, the examination being conducted, of course, in the presence of a female attendant or friend? (2) What does the code of medical ethics have to say about it?

Yours, &c, M. B., Abern.

[A husband usually retires while his wife is being examined.—ED. I. M. R.]

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SHOULD A DOCTOR CONFINE HIS WIFE?

To the Editor, "INDIAN MEDICAL RECORD."

Sir,—May I trouble you for a reply to the question whether there is any breach of professional etiquette in a medical man confining his own wife?

Yours, &c., F. R. C. S. I.

[Certainly not.—ED. I. M. R.]

REVIEWS.

A MANUAL OF THE MODERN THEORY AND TECHNIQUE OF SURGICAL ASEPSIS: By CARL BECK, M.D., Visiting Surgeon to St. Mark's Hospital, and to the German Poliklinik of New York City, with 65 illustrations and 12 full page plates. Pages 306. (Published by W. B. SAUNDERS, 925, Walnut Street, Philadelphia, 1895.) Price \$ 1.25.

The above volume is one of the latest issues of SAUNDERS'S New Afl Series. It is the embodiment of the most advanced and up-to-date literature on the great subject of *Asepsis*. Although Dr. CARL BECK has limited himself to only 300 pages, (and the print is large and beautifully clear), he has within this space, packed away an immense amount of information and instruction, as only a master-teacher can do. The work is based on the methods employed by the author in the treatment of wounds at the New York Post-Graduate School and St. Mark's Hospital.

Although his aim has been to present the subject in as *practical* an aspect as possible, yet *theory* has not been altogether lost sight of, inasmuch as most of the technique of aseptic wound-treatment is founded on experiments carried on in the laboratory. Certain *minutia* (important, because their neglect mars surgical success), such as *sterilizing and disinfection of dressings* have received prominence. *Iodoform*, among antiseptics, is assigned the *locus primus* by the author: it is hence fully discussed. *Tuberculous* in relation to *asepsis* is also treated of, while the important subject of *anesthesia* (since "its inefficient mastering is apt to impair seriously the aseptic condition of the patient.") has a whole section devoted to it.

The plates and inset of the illustrations are original, being reproductions of photographs of patients and apparatus, others being taken from standard works. The author has invented a special operating suit which he has termed the "black operating suit." It is intended to be worn by the patient during operation: the site of the operation being exposed by a slit in the suit. To risk contamination and rather apt to obstruct the surgeon while operating, when too, it is apt to absorb blood, and

liquids, &c., which must remain in contact with the patient for a time at least. We prefer a good serviceable macintosh and the site of operation bare. Dr. CARL BECK has transmitted his monograph to the memory of his late teacher, "BERNHARD VON LANGENBECK, the great surgeon and philanthropist." As usual, the paper, printing, binding, &c., are of excellent quality. We have no doubt that this *theoretical-practical* treatise on *Asepsis* will hold a prominent place among contemporary literature thereon.

SANITATION AND HEALTH: a lecture delivered to the Troops at Ranikhet, by COL. REGINALD CRANE HART, V.C., B.E., Director of Military Education in India. Revised by Brigade-Surgeon Lieut.-Col. T. H. HENDLEY, C.I.E. Published by WILLIAM CLOWES and SONS, Limited, 13, Charing Cross, London. 1894. Pp. 57.

This is a capital little *health compendium*, and we venture to think it will be of more extended use than to troops merely. Its inception and birth were brought about by the exceeding unhealthiness of the rainy season of 1888; especially in the Rohilkhand District, when Colonel HART made most of the opportunity thus afforded, by delivering this lecture to the troops, then stationed at Ranikhet. Although originally intended for young officers and men coming out to India, we feel it will be none the less welcome by a large class of civilians to whom it will no doubt come as a boon, owing to its extreme portability, and the conciseness and terse manner in which it is written. It deals with every-day evils present in India, and how they may be prevented and guarded against by the exercise of common sense and sanitary precaution. It has been revised by Surgn. Lieut.-Col. T. H. HENDLEY, C.I.E.

It is one of the best little *Health Manuals* we have seen, for public use. All technical terms are avoided, and in every way, the possession of some such *read mecum* is absolutely necessary in every home. We would therefore strongly recommend the purchase of Col. HART's little brochure on *sanitation and health*, which if carefully read and followed, will, we have no doubt, be the means of preventing many a doctor's or undertaker's bill.

Government Medical Gazette.

GOVERNMENT OF INDIA.

Surgn.-Maj. H. L. Battersby, Army Med. Staff, Newpore, was in med. charge of Bundelkhand Political Agency, in addition to his milly. duties, from 21st March to 1st April.

Senior Asst. Surgn. (with hony. rank of Surgn.-Lieut.) James McNaught to be Senr. Asst. Surgn., with hony. rank of Surgn.-Capt.

First class Asst. Surgn. Charles Atkins to be Senr. Asst. Surgn. with hony. rank of Surgn.-Lieut.

Second class Asst. Surgn. George How Crowe to be first class Asst. Surgn.

Third class Asst. Surgn. William Jeremiah Phillips Martin to be 2nd class Asst. Surgn. from 1st Dec. 1894, vice Senr. Asst. Surgn. (with hony. rank of Surgn.-Capt.) Henry James Miller, retired.

Second grade Hosp. Asst. Shiu-mahar Lal, attached to No. 14 Himalaya Sanitary Party, is apptd. in addition to his own duties, to Station Sanit. Depy., Simla, during absence on deputation of Civil Hosp. Asst. Subramanyam Khan.

Mr. U. Banks, M.A., C.M., B.F.S., is conferred in Lieutenant. Med. Service, and his services are placed permanently at disposal of Govt. of Hong. from 1st Nov. 1902, when he was apptd. Civil Med. Offr. of Yankhai.

Services of Surgn.-Col. J. H. Newman, M.D., I. M. S. (Beng.) Ready, Surgn. and Chief Med. Offr. in Rajputana, are placed at disposal of Home Dept. from 29th March.

Surgn.-Maj. George Tucker Thomas, Arthur James Sturmer, Archibald Adams, M.D., have completed twenty years' full pay service and are to be Surgn. Lieut.-Cols., 31st March.

Surgn.-Capt. Arthur Owen Evans has completed twelve years' full pay service and is to be Surgn.-Maj.

Surgn.-Lieut.-Col. Arthur Lake Hackett, I. M. S. (Mad.), Surgn. 2nd Dist., Madras, is permitted to retire from service, from 4th May.

Senr. Asst. Surgn. and Henry. Surgn.-Capt. J. Hamilton, attached to Med. Store Depot, Calcutta, is granted 80 days' priv. leave from 5th May.

Senr. Hosp. Asst. Deo Dutt Panday returned to duty and resumed Sub-med. charge of Ready, Hosp. Nepal, on 31st March.

The services of Surgn.-Lieut. W. Young, M.B., C.M., I. M. S. (Beng.) are placed temply. at disposal of Govt. of N.-W. P. and Oadh.

Surgn.-Capt. H. E. Drake-Brockman, I. M. S. (Beng.) on mly. duty, Nowgong, is apptd. to med. charge of Bundelkhand Political Agency, in addition to his mly. duties, from 2nd April.

Surgn. Lieut.-Col. Frederick Augustus Smyth to be Brig.-Surgn. Lieut.-Col., 12th Jany.

Surgn.-Lieut. Bruce Gordon Seton to be Surgn.-Capt., 30th Jany.

Surgn.-Lieuts. Robert Henry Elliot, Robert King Mitter, Wilfred Ernest Arbuthnot Armstrong, to be Surgn.-Capts., 30th Jany.

Surgn.-Lieut. William Carr Sprague, M.D., to be Surgn.-Capt., 30th Jany.

Brig.-Surgn. Lieut.-Col. W. R. Hooper, I. M. S., granted temply. rank of Surgn.-Col. whilst Preslt. of Med. Board, India Office, 24th April.

Surgn.-Maj. H. N. V. Harington, I. M. S. (Madras), Offg. Ready, Surgn. in Meywar, granted priv. leave for two months from 15th instant.

Surgn.-Maj. J. Crofts, M.D., I. M. S. (Beng.) Med. Offr. of the Kotah and Jhalawar Agencies, availed himself, on 7th instant, of priv. leave granted him on 29th April.

BENGAL GOVERNMENT.

Surgn.-Col. R. D. Murray made over charge of Chittagong Jail to Surgn.-Maj. J. Lewtas on 7th April.

Asst. Surgn. Bana Mali Roy, doing superny duty at Medical College Hosp., is apptd. to do superny. duty at Presdy. Genl. Hosp.

Surgn.-Capt. T. Grainger, Offg. Civil Surgn. of Noakhali, is apptd. to act as Civil Surgn. of Hooghly during absence of Surgn. Lieut.-Col. Bussik Lal Dutt.

Surgn. Lieut.-Col. A. Crombie, Surgn. Supdt. of Presdy. Genl. Hosp., is allowed priv. leave for one month and nineteen days.

Surgn.-Capt. H. W. Pilgrim, Offg. First Resdt. Surgn., Presdy. Genl. Hosp., is apptd. to act as Surgn. Supdt. of that institution, during absence, on leave, of Surgn.-Lieut.-Col. A. Crombie.

Surgn.-Maj. A. Keogh, Med. Staff, is apptd. to have charge of civil med. duties at Barrackpore, in addition, to his own duties, from 5th April.

Surgn.-Capt. J. E. Panloto, Second (Cadet) Battalion, Calcutta V. B. Co., is allowed leave of absence for three months from 18th April.

Asst. Surgn. Surendra Nath Dutt, offg. at Lalbag Disp. in Murshidabad Dist., is confirmed in that appointment.

Asst. Surgn. Motbura Nath Sen, offg. at Madhubani sub-divn. and disp. in Darbhanga Dist., is confirmed in that appointment.

Asst. Surgn. Haril Charan Sen is apptd. to do superny. duty at Med. Coll. Hosp.

Surgn.-Capt. T. Grainger made over charge of Noakhali Jail to Moulvi Abdul Kadir on 2nd May.

Moulvi Abdul Kadir made over charge of Noakhali Jail to Asst. Surgn. Ganga Govinda Sarkar on 6th May.

Surgn.-Lieut.-Col. B. L. Dutt made over charge of Hooghly Jail to Surgn.-Capt. T. Grainger on 5th May.

Asst. Surgn. Khirede Chandra Chowdhuri apptd. to do superny. duty at Campbell Med. School and Hosp. until further orders, from 5th April.

Asst. Surgn. Kuthja Lal Banya, Offg. Teacher of Med. and Midwifery in Dacca Med. School, confirmed in that appointment.

Asst. Surgn. Mohindra Lal Mitter, a superny. at Med. Coll. Hosp., Calcutta, allowed leave for three months.

PUNJAB GOVERNMENT.

Surgn.-Capt. F. B. Ozardi made over charge of duties of Supdt. of Abbottabad Jail to Surgn. Lieut.-Col. J. T. B. Bookey on 18th April.

Surgn.-Capt. W. R. Clark made over charge of duties of Supdt. of Ferozepore Jail to Surgn.-Capt. A. Guist-Sparks on 6th April.

Asst. Surgn. Sahib Ditta, doing genl. duty at Amritsar, is apptd. to offe. as Civil Surgn. of Gujrat from 27th April, vice Surgn.-Capt. H. M. Morris, transferred.

Asst. Surgn. Mul Chand, Mooltan Civil Hosp., is apptd. to offe. Civil Surgn. of Mooltan, from 27th April in addition to his other duties, vice Surgn.-Capt. W. R. Clark, transferred.

Surgn.-Capt. W. R. Clark is apptd. to offe. as Civil Surgn. of Lahore Supdt. of Lahore Lunatic Asylum, from 29th April, during absence on furlough of Surgn.-Maj. W. Coates.

First class Hosp. Asst. Nur Bukhsh, Dera Ismail Khan Jail Hosp., has obtained seven months' furlough, and was relieved of his duties on 25th April by 2nd class Hosp. Asst. Hakim Bai, transferred from Bhakkar.

Asst. Surgn. Duni Chand Rai, from Jagadhri Disp., Umballa Dist., to Bhiwani Disp., Hissar Dist., which he joined on 26th April, relieving Asst. Surgn. Hira Lal.

Third class Hosp. Asst. Radha Kishen, Gungera Disp., has obtained 45 days' priv. leave from 20th April.

The following newly passed Hosp. Assts. were granted one month's leave on full pay from dates mentioned opposite their names—

Hosp. Asst. Lahoria Ram, 1st November 1894; Hosp. Asst. Amir Khan, 20th Nov. 1894; Hosp. Asst. Ganesh Das, 18th Nov. 1894.

On return from the one month's leave, 3rd class Hosp. Assts. Lahoria Ram, Amir Khan and Ganesh Das reported themselves, respectively, to Civil Surgns. of Ferozepore, Karnal and Delhi for genl. duty on 18th, 25th and 26th Dec. 1894.

The following transfers were made in Delhi Dist., in interests of public service:—Second class Hosp. Asst. Dilwar Ali, from Najafgarh to Okla Canal Disp., 14th April.

Second class Hosp. Asst. Abdul Karim, from Okla Canal Disp. to Jail Hosp., 18th April.

First class Hosp. Asst. Fakir-ulla, from Delhi Jail to Najafgarh Disp., 22nd April.

Surgn.-Capt. H. M. Morris assumed charge of civil med. duties of Mooltan, on 1st May, relieving Asst. Surgn. Mool Chand.

Sheikh Miran Bakhsh, Extra Asst. Commr., held charge of duties of Supdt. of Hoshiarpur Jail from 25th March to 3rd April.

Surgn.-Capt. W. R. Clark made over charge of duties of Supdt. of Mooltan Dist. Jail to Asst. Surgn. Mool Chand on 27th April.

Surgn.-Capt. H. M. Morris made over charge of duties of Supdt. of Gujrat Jail to Asst. Surgn. Sahib Ditta on 27th April.

Surgn.-Maj. S. F. Bigger made over charge of duties of Supdt. of Bannu Jail to Surgn.-Capt. H. Fooks on 30th April.

MADRAS GOVERNMENT.

Surgn.-Maj. Winthrop Benjamin Browning to be Surgn., Second Dist., Madras, in succession to Brig.-Surgn. Lieut.-Col. A. L. Hackett, retired, but to continue to be Surgn. to H. E. the Governor until further orders.

Surgn.-Maj. Donald Frederick Dymott, M.B., to act as Surgn., Second Dist., Madras, during employment of Surgn.-Maj. W. B. Browning on other duty, or until further orders.

Surgn.-Maj. Francis Casement Reeves to be Dist. Med. and San'y. Offr. and Supdt. of Jail, Madura.

Surgn. Lieut.-Col. Thomas James Hackett Watkins to be Dist. Med. and San'y. Offr., Malabar, to act as Dist. Med. and San'y. Offr., Salem, during absence of Surgn.-Lieut.-Col. S. N. Roberts-Harrison on leave, or until further orders.

Surgn.-Capt. Frank Charles Penrice to be Dist. Med. and San'y. Offr., Coimbatore, and Supdt. of Jail, Berhampur, in succession to Surgn. Lieut.-Col. T. J. H. Watkins.

BENGAL GOVERNMENT.

Surgn-Maj. R. Aker is apptd. to act as Civil Surgn. in addition to his own duties, from 30th April.

Asst. Surgn. Ramabandha Bhattacharya, L.M.S., has been placed on genl. duty from 3rd April.

Asst. Surgn. Matilal Gangadass Desai, L.M.S., allowed priv. leave for one month and fifteen days.

Surgn-Maj. A. E. J. O'Leary, F.R.C.S., apptd. to act temply. as Civil Surgn. at Batare, in addition to his own duties, vice Surgn.-Lieut. B. H. F. Leumann, M.B., transferred, from 1st April.

Surgn-Maj. J. McCloghry and G. E. Fooks respectively transferred over and received med. charge of Ahmetabad Central Prison on 30th April.

Asst. Surgn. Darabala Edulji Kothavala, L.M.S., has been apptd. to act as Supdt. and Med. Offr. Siml Convict Hosp. from 11th March, during absence of Asst. Surgn. George M. Dixon, L.M.S., granted furlough.

CENTRAL PROVINCES GOVERNMENT.

Second class Civil Hosp. Asst. Nanak Parshad, doing duty at Barhampur Disp., Nimar Dist., directed to do duty under orders of Civil Surgn., Pachmarhi.

Surgn.-Capt. C. N. Bensley, Civil Surgn., permitted, by Her Majesty's Secy. of State for India to return to duty within period of leave granted him.

Second class Civil Hosp. Asst. Syad Muhammad Hahlar Hussain Haidari, attached to Main Disp., Khandwa, hold temp. med. charge of Nimar Dist., from 27th Feb. to 18th March, in absence of Civil Surgn.

First grade Asst. Surgn. J. W. Hogan, whose services have been placed at disposal of Chief Commr., Central Prov., by Surgn.-Genl. with Govt. of India, is apptd. to offic. as Civil Surgn., Wardha.

Asst. Surgn. J. W. Hogan, Offg. Civil Surgn., Wardha, to exec. and med. charge of Wardha Jail.

Asst. Surgns. E. P. Clements and J. W. Hogan, respectively made over and received exec. and med. charge of Wardha Jail on 18th ultimo.

N.W.P. AND OUDH GOVERNMENT.

Surgn-Maj. T. H. Sweeney, Civil Surgn., from Fyzabad to Benares as offg. Civil Surgn., 1st class.

Brig-Surgn. Lieut.-Col. R. Jameson, Depy. Sany. Commr., 1st Circle, N.W. P. and Oudh, offd. as Sany. Commr. N.W. P. and Oudh, in addition to his other duties from 30th March to 11th April.

Surgn-Maj. D. F. Barry, Civil Surgn., from Sitapur to Gorakhpur.

Surgn-Maj. C. O. Vaid, Civil Surgn., from Kheri to Sitapur.

Surgn-Maj. C. P. Lukie, Civil Surgn., from Shahjahanpur to Fyzabad.

Surgn-Maj. J. C. C. Smith, Civil Surgn., from Bara Banki to Shahjahanpur.

Surgn-Maj. G. A. Emerson, Civil Surgn., from Jaunpur to Jhansi.

Surgn.-Capt. L. G. Fischer, Civil Surgn., from Budaun to Meerut.

Surgn.-Capt. J. M. Cadell, Offg. Civil Surgn., on completion of special duty, to civil med. charge of Etawah Dist.

Surgn-Maj. T. H. Sweeney, Civil Surgn., Benares, to hold visiting med. charge of Saugor Dist. in addition to his other duties.

Surgn-Maj. G. C. Vaid, Civil Surgn., Sitapur, to hold visiting med. charge of Kheri Dist. in addition to his other duties.

Surgn-Maj. C. P. Lukie, Civil Surgn., Fyzabad, to hold visiting med. charge of Bara Banki Dist. in addition to his other duties.

Surgn-Maj. J. F. Zeeby, Civil Surgn., Saharepur, to hold visiting med. charge of Saharepur Dist. in addition to his other duties.

Surgn.-Capt. L. G. Fischer, Civil Surgn., Meerut, to hold visiting med. charge of Budaun Dist. in addition to his other duties.

Asst. Surgn. Subhishil Das, in charge of Kotar Disp., to hold civil med. charge of this dist. in addition to his other duties.

Asst. Surgn. Chandra Kanta Chakrabarti, in charge of Kotar Disp., to hold civil med. charge of this dist. in addition to his other duties.

Asst. Surgn. Hari Gopal Chakrabarti, in charge of Kotar Disp., to hold civil med. charge of this dist. in addition to his other duties.

Asst. Surgn. Anwar Most. Khan, in charge of Kotar Disp., Jaunpur, to hold civil med. charge of this dist. in addition to his other duties.

Asst. Surgn. Kotar Nath Sen, in charge of Kotar Disp., Budaun, to hold civil med. charge of this dist. in addition to his other duties.

Surgn-Maj. P. J. Freyer, Civil Surgn., Benares, leave (M.C.) out of India for six months from 1st May.

Surgn-Lieut. Col. E. Mair, Supdt. Central Prison, Meerut, priv. leave for three months from 1st May.

Surgn-Maj. J. Anderson, Civil Surgn., Bareilly, to hold charge of Central Prison, Bareilly, in addition to his other duties.

BURMA GOVERNMENT.

First grade Hosp. Asst. Nissari Htoo relinquished charge of Outpost Hosp. N'Krong, Myitkyina Dist. on 1st March and assumed charge of Civil Disp., Myitkyina, on 1st March.

Second grade Hosp. Asst. Shahr Abdulla, on arriving himself of priv. leave for three months relinquished charge of Contagious Diseases Hosp., Rangoon, on 23rd April.

Second grade Hosp. Asst. Jogen-ra Nakh Blatrecchari relinquished charge of Genl. Hosp. Rangoon, on 23rd April and assumed charge of Contagious Diseases Hosp., Rangoon, on 24th April.

Second grade Hosp. Asst. Khudabarith on resigning on special cholera duty at Kungyangon, Hantawaddy Dist., relinquished charge of Genl. Hosp., Rangoon, on 24th April.

Third grade Hosp. Asst. Maung Lu Gale, on proceeding to Bhamo to give med. evlcnce before Sessions Judge, relinquished charge of Civil Hosp., Myitkyina, on 3rd March, detained at Bhamo up to 9th March.

Third grade Hosp. Asst. Maung Lu Gale, priv. leave for three months, from 10th March.

Third grade Hosp. Asst. K. Perumal Pillay relinquished charge of Police Hosp., Katha, on 2nd April, and assumed charge of Outpost Hosp., Mohayin, Katha Dist., on 2nd April.

Third grade Hosp. Asst. Tjijung Koonin relinquished charge of Outpost Hosp., Mohayin, Katha Dist., on 2nd April and assumed charge of Police Hosp., Katha, on 1st April.

Third grade Hosp. Asst. Kodas Chander, on resigning charge of Police Hosp., Bhamo, on 26th March, and assumed med. charge of Kungtung Rd. Survey Party, at Fort Steelman, on 16th April.

Third grade Hosp. Asst. Raghunatha Singha relinquished charge of Police Hosp., Bhamo, 15th April, and assumed charge of Outpost Hosp., Myothit, Bhamo Dist., on 17th April.

Third grade Hosp. Asst. Shyam Khoro Day relinquished charge of Outpost Hosp., Myothit, Bhamo Dist., on 17th April and assumed charge of Police Hosp., Bhamo, on 19th April.

Third grade Hosp. Asst. Shyam Khoro Day, priv. leave for three months, relinquished charge of Police Hosp., Bhamo, on 22nd April.

The services of second class Mily, Asst. Surgn. R. W. A. L'Ettrange are placed at disposal of Chief Commr. of Burma.

Surgn.-Capt. C. W. Johnson, M.B., made over and Surgn.-Lieut. H. W. H. Reilly, M.B., assumed, as collateral charge, duties of Civil Surgn., Meiktila, on 30th April.

Surgn.-Capt. K. Prasad made over, and Surgn.-Capt. F. W. Gibbard, A.M.S., assumed as collateral charge, the duties of Civil Surgn. Shwebo, on 30th April.

Surgn.-Capt. A. R. P. Russell made over, and Surgn.-Capt. K. Prasad assumed, charge of duties of Civil Surgn., Tongue, on 3rd May.

Surgn. Lieut.-Col. O. Baker made over, and Surgn-Maj. R. E. S. Davis, M.B., assumed charge of duties of Senior Civil Surgn. and Supdt., Lunatic Asylum, Rangoon, on 1st May.

Third grade Local Asst. Surgn. Maung Tato, on proceeding to Rangoon for promotion exam., relinquished charge of Civil Disp., Allampon, Thabemye Dist., on 1st May.

First grade Hosp. Asst. Allamin, on return from leave, assumed charge of Civil Disp., Allampon, Thabemye Dist., on 1st May.

Second grade Hosp. Asst. D. DeSouza relinquished med. charge with M.C. service at Bhamo on 10th March and assumed charge of Police Hosp., Bhamo, on 10th March.

Second grade Hosp. Asst. D. DeSouza relinquished charge of Police Hosp., Bhamo, on 26th March and assumed charge of Jail Hosp., Meiktila, on 26th March.

ASSAM GOVERNMENT.

Priv. leave for one month granted to 3rd grade Hosp. Asst. Nalini Kanta Sen Gupta, in med. charge of Nokhila Disp. in Naga Hills Dist. from 27th April.

Third grade Hosp. Asst. Syed Abdul Jalal, a superny. in Naga Hills Dist. is appld. to med. charge of Nokhila Disp. in that Dist. from 27th April, during absence on priv. leave of 3rd grade Hosp. Asst. Nalini Kanta Sen Gupta.

Priv. leave for three months is granted to 3rd grade Hosp. Asst. Kamal Charan Datta, in med. charge of Chief Commr's Staff, from 3rd May.

3rd grade Hosp. Asst. Nil Kanta Sen, a superny. in the Darrang and Jaintia Hills Dist., is appld. to med. charge of Chief Commr's Staff from 3rd May, during absence on priv. leave of 3rd grade Hosp. Asst. Kamal Charan Datta.

Priv. leave for three months is granted to 2nd grade Hosp. Asst. Ram Charan Panlay, in sub-med. charge of Jail and Police Hospitals at Tezpur in Darrang Dist. from 3rd May.

Third grade Hosp. Asst. Chandra Kisor De, a superny. in Darrang Dist., is appld. to sub-med. charge of Jail and Police Hosps. at Tezpur, from 3rd May, during absence on priv. leave of 2nd grade Hosp. Asst. Ram Charan Panlay.

Babu Nalini Kanta Sen Gupta is confirmed as a 3rd grade Hosp. Asst. in Assam from 30th Oct. 1894.

Babu Chandra Kisor De is confirmed as a 3rd grade Hosp. Asst. in Assam from 22nd April.

Third grade Hosp. Asst. Kumudini Kanta Chakravarti, in med. charge of coolies on the Nicheguard-Manipur Road, is appld. a superny. in Naga Hills Dist. from 4th April.

Sick leave for twenty-two days, granted to 3rd grade Hosp. Asst. Kumudini Kanta Chakravarti, a superny. in Naga Hills Dist. from 12th April.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Rs. 1 for subscribers and Rs. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

MAHONEY.—On 20th April, at Madras, the wife of Asst. Surgn. C. Mahoney, 5th Infy., Hyderabad Contingent, of a son.

STEVENSON.—On 16th May, at Lanowli, the wife of Surgn.-Maj. Stevenson, I. M. S., of a son.

DEATHS.

CARTER.—On 4th May, at Budleigh Salterton, Henry John Carter, F.R.S., retired Surgn.-Maj., Bombay Army, aged 82 years.

DEANE.—On 7th May, at Naini Tal, Surgn.-Maj. W. Deane, F.R.C.S.I., Civil Surgn., Moradabad, N.-W. P., aged 39 years.

GUNNING.—On 1st May, Brig.-Surgn. Lieut.-Col. James Davis Gunning, A.M.S., on board the troopship *Malabar*, one day out from Gibraltar, homeward bound, aged 50 years.

HARPER.—On 3rd May, at Abingdon Road, Kensington, W. Henry Harper, Deputy Surgn.-Genl., Madras Medical Service (retired).

MOOREHEAD.—On 6th May, at Margate, Edward Moorhead, M.D., Deputy Insp.-Genl. (retired) Army Med. Dept. aged 76 years.

NOTICES TO CORRESPONDENTS.

A. L. M. (Jalpaiguri).—We will do our best for you gladly.

W. J. M. (Bain).—The information you seek had better be obtained direct from the Surgeon-General with the Government of India.

D. P. (Government College, Jabalpur).—Your request was attended to in a previous number. The *Ganjinia Tibbat* is published in Lahore. Send your order to our manager for any medical works you need.

S. N. G. (Calcutta).—We regret the long delay, but sincerely hope for the leisure that will enable us to fulfil the task.

A. C. T.—Your claim is a very fair one, and we wish you success.

S. R. P. (Hati Mardan).—Yes, look up the published list.

M. (Cutch).—Look up Corna's "New Boundies."

M. L. (Gangavati).—The subscriptions for the *Record* and the Indian Medical Association are separate. The fee for the latter is Rs. 5, and you will find full particulars for the former in our "Business Notices."

J. P. (Manipur).—You have our sympathy, but we can only counsel further patience.

We are grateful for many contributions received, both for our "Original" columns and "Mirror of Practice." We would congratulate our co-workers.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medical-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjinia Tibbat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Sculpel—The Practitioner—Medical Missions.

Gazettes of the Governments of India, N.-W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Pioneer—Ganjinia Tibbat—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine.

Books.—*Sanitation and Health.* By Col. Reginald Clare Hart. (Publishers: Wm. Clowes & Sons, Ltd., 13, Charing Cross, London, 1894).

Literary Contributions and Letters from: Surgn.-Capt. Patrick Mohir, M.D., F.R.S.E., F.R.C.S.E., D.P.H., Hyderabad; John Morton, M.D., Munrozie; P. R. Hay Jagannadham, B.A., M.B., D.M., Khetia; Charles Forbes, M.D., C.M., D.P.H., London; Ashby Kumar Chatterjee, L.M.S., Gwalior; Maj. Bhadrar A. Mitra, L.R.C.P., & S., Kashmir; Edward Balm, M.D., Hyderabad; Asst. Surgn. M. N. Ghosh, L.M.S., Allahabad; Civil Hosp. Asst. C. A. Therman, Teikbery; Chait Lal Bose, M.B., F.R.C.S., Calcutta; and others.

Original Articles.

A CHLOROFORM ACCIDENT: A COMMENTARY ON THE THEORY OF "HEART FAILURE."

By SURGEON-CAPTAIN PATRICK HEER, M.D.,
F.R.S.E., F.R.C.S.E., D.P.H., (Cantab.)

Lecturer on Medicine and Pathology,
Hyderabad Medical School.

THE following case of resuscitation from apparent death from chloroform narcosis is probably one of the most interesting on record, and a review of the circumstances connected with it will shew that it is probably quite unique amongst cases of the kind.

I happened to visit the Afzul Gunj Hospital (the General Hospital of Hyderabad, Deccan.) on the morning of the 13th September 1894, to see Surgeon-Lieutenant-Colonel LAWRIE perform an exploratory laparotomy, preliminary to ovariectomy, on a woman about 60 years of age; but, in addition to the operation, I had an unexpected experience, which gave me a strange and serious lesson in chloroform administration.

The patient was brought into the operating theatre about 8-30 A.M. having previously received a hypodermic injection of quarter of a grain of morphine. I was kindly invited to examine the patient, who was a shrivelled up old woman without a particle of fat on her body. The abdominal cavity was enormously distended, somewhat globular, the greatest girth measurement being over the umbilicus; the surface was glistening, and several large veins passed over it in various directions; it was tense and highly elastic, dull on percussion over the whole abdomen (including the hypochondriac and lumbar regions), except over one small area in the epigastric region.

Immediate percussion shewed that the peritoneal cavity was enormously distended with fluid, but on firm sharp "pitting" one felt an irregular tumour-like mass, situated in the hypogastric, two iliac, and part of the umbilical regions. The apex-beat of the heart was seen to correspond with the 3rd interspace, just inside the nipple line, and although the tumour mass did not move on respiration, the upper part of the chest (from the 5th rib upwards) moved freely; the pulse was small, frequent, and of fair tension, and gave me the idea of the arteries being arteriosclerotic, which the tortuous superficial temporal vessels tended to confirm. The high tension of the abdominal walls, the depth of the tumour, and the fact that being a Mahomedan woman, a vaginal examination could not be made, rendered a positive diagnosis impossible. Provisionally it was diagnosed as an ovarian tumour, probably solid, requiring an exploratory laparotomy.

Chloroformisation was commenced, and up to the time two drachms had been administered, nothing unusual took place. The pulse and respiration were regular. Whilst the third drachm of chloroform was being administered, I heard the patient make a peculiar guttural noise, but I was not near enough to recognise whether she was snoring. Afterward, one of the students standing by the

patient's head remarked "snoring," after which Dr. LAWRIE, who was recording the events during the chloroformisation, said "noisy expiration," and remarked at the same time, that he did not hear actual snoring. The great protuberance of the patient's abdomen prevented the visitors who were sitting in the front seats of the operating theatre and on a level with the patient, from actually seeing the respiratory movements. Nevertheless, I noticed that from the time Dr. LAWRIE said "noisy expiration," his attention was rivetted on the patient's respiration, which, apparently became shallower and shallower. The chloroformist then said "respiration stopped," and pushed the patient's jaw forward. Dr. LAWRIE thereupon ordered the tongue to be drawn out of the mouth with a forceps and at once began artificial respiration, standing on one side of the patient, but after making a few compressions, finding artificial respiration in that position ineffectual, he jumped on to the table and began Howard's direct method of artificial respiration, the patient's head being at the same time drawn over the end of the table, and the neck put on the stretch. As soon as Dr. LAWRIE got on the table, I stepped forward, and at Dr. LAWRIE's request, tapped the abdominal cavity in the usual place for ascites—a bloody serum immediately spurting out of the cannula with great force. Even Howard's method proved futile—the walls of the chest appearing to be perfectly inelastic. Dr. LAWRIE then (whilst continuing the artificial respiration), tried direct mouth-to-mouth inflation of the lungs, and after several attempts the patient gasped feebly; this process of inflation being continued by Dr. LAWRIE, the House Surgeon, Dr. ABDUL HOSSEIN, and myself in turns, until eventually the patient took one deep inspiration, followed by a series of others, and in about ten seconds respiration became quite regular once more.

The whole of the above transpired in a considerably shorter period than it has taken me to describe it. I learnt afterwards that the record showed that the patient had ceased to breathe for fully six minutes, whilst the pulse continued to beat for two minutes after the respiration had stopped; but as it had ceased to be felt at the wrist, life seemed apparently extinct. No doubt the heart was acting, but Dr. LAWRIE abstained from attempting to ascertain that fact, recognising that even a few seconds lost at such a critical time was of vital significance to the success of the measures of resuscitation.

The distension of the abdomen had created the utmost condition of tension. The pressure, like hydrostatic pressure wherever it is met with, exerted its effects equally in all directions upon the arch of the diaphragm, and through it on the lungs and heart, upon all the blood vessels at the back of the abdominal cavity, &c.

The lungs admitted a comparatively small quantity of air, to compensate which, there was increased frequency in respiration.

In this case had the pulse, (which was fairly good for about three minutes after the cessation of respiration) been taken as a guide, a period of time would have been lost which would probably have ended the patient's life. By watching the patient's respiration, not only was the stoppage noted, but the fact that this breathing was gradually

becoming more and more shallow was also observed, and the chloroformist and those noting the state of the patient's respiration, were ready to perform artificial respiration.

There could not have been a worse case than this, in which to administer chloroform, nor one in which to resuscitate when an over-dose had been given, because of a dilated and weak heart, whose normal action was mechanically interfered with, diseased arteries, compressed lungs, &c. The comparatively small lung area and weak heart were however, I believe the reasons why she did not get an over-dose earlier; because with a smaller area for absorption in the lungs, less chloroform was absorbed by the pulmonary capillaries, and with a small weak heart, less was discharged into the respiratory and other nerve centres. Were chloroform to act directly on the heart, it is almost impossible to conceive how in this case resuscitation could have taken place; for it was laboring under such insuperable disadvantages, (besides that of prolonged malnutrition as a result of bad circulation in the probably diseased coronary arteries,) that it must have failed. Further, why should a few respiratory movements have restored to the heart full vigour once more? The removal of the fluid by aspiration no doubt had a great deal to do with the recovery of the patient, by at once giving a larger breathing surface, and by removing the pressure on the diaphragm and the pericardial sac.

The phenomena co-existing in this old woman's case render it comparable with the important experiment of the 2nd Hyderabad Chloroform Commission, which shewed that fatty degeneration of the heart (artificially produced by phosphorus poisoning), induced a certain amount of safety under chloroform; for in this latter case the smaller the quantity of chloroform thrown into the lungs, the nervous system and the coronary arteries by the weak fatty heart, the less chloroform reached the nerve centres, and especially the respiratory centre. It is quite possible that in this case elimination of chloroform was interfered with more than it is under ordinary circumstances; for inspiration being accomplished with a certain amount of facility, on account of the development of the extraordinary muscles of respiration; expiration was less vigorous than usual, because of (1) the loss of function of the abdominal muscles; and (2) partial absence of the elastic recoil of the lungs and the chest walls, which was prevented by the pressure from below, and of the chest walls from senile changes in the ribs. It may be remarked also that the great interference with the action of the diaphragm as an inspiratory muscle must have also considerably reduced the amount of chloroform inhaled at each inspiration.

Another curious fact about this case appears to be that the patient presented none of the symptoms of asphyxia, but rather those of gradual cessation of both the respiratory and cardiac functions. I do not offer any opinion as to why this comparatively small quantity of chloroform should have produced the effects it did in this case, beyond that inferentially given. Under any circumstances, I would state that cases of this kind require the greatest possible amount of watching and care during chloroform administration, and even

with these precautions, I believe, that it is impossible to avoid accidents such as this one was. I have tried to explain. An important question arises out of the circumstances of this case, namely—Could this accident have been avoided, and yet the patient got safely under chloroform? The answer I would give is: Yes, if it were given very slowly; and if, as a preliminary measure, the ascitic fluid were evacuated. This case teaches another important fact—that it is advisable in all such cases to evacuate a part at least, of the ascitic fluid before chloroformisation, when there is such enormous distension, especially in old people. If the accident had not taken place when it did, it is very likely it would have occurred somewhat later, after a large incision had been made in the abdominal walls, and under circumstances which would have been obviously very disastrous. There is no doubt, also, but that the pressure of the ascitic fluid upon the inferior vena cava considerably decreased the blood going to the lower extremities—most of that which was poured into the aorta at each beat of the heart going to the nerve centres of the brain. I entertain the strongest conviction that were it not for the direct inflation, the patient's life would have been lost. Indeed it was practically the only means we could have adopted with success. It may be an exceedingly unpleasant method, but the object in view is to save the life of our patient, and any means by which we can do this must have something to support it. In the case under observation, the process was excessively unpleasant, but we were rewarded sufficiently by the result which immediately followed.

I believe that in cases of this kind in England, ether would be specially chosen for the purpose of stimulating the heart and resuscitating the patient; whereas all those who had anything to do with the Chloroform Commissions of Hyderabad know that with a rapidly decreasing blood-tension, the introduction of ether has a powerfully accelerating effect upon the descent of the needle of the manometer. Experiment No. 72 of the 2nd Hyderabad Chloroform Commission forcibly riveted this fact upon my mind. The details of this experiment (which will be found in the report of the Hyderabad Chloroform Commission); proved these facts unequivocally, and may be referred to by those interested in this point.

Per contra, it was shown in the same experiment and in several others, that when the tension was not low, that is, when it is fairly good and not declining, the introduction of ether subcutaneously, raised the blood-tension in the vessels. These are not the cases which need any stimulation. I therefore feel convinced that the practice of introducing ether in cases of chloroform accidents, and especially in those of the so-called "cardiac failure," (if there be such thing), is false in principle, and opposed to scientific experience. It would be equally justifiable to introduce hydrate of chloral subcutaneously, or even chloroform itself, for the same purpose. In several former communications to the medical press, I have attempted to point out this point, but ether is still given hypodermically, and sometimes still off chloroform poisoning, in whom ether has been thus administered. In most of the fatal cases of chloroform poisoning in which ether is thus administered, the ether

has absolutely nothing to do with this untoward result, because the peripheral circulation is absent, or so feeble, that no absorption can take place either through the lymphatics or capillaries of the circulatory system. And in other cases where patients recover in which ether is administered, I believe they do so in spite of, and not as a result of the use of the ether.

Regarding the accident under review, the ordinary opinion would be that it was the result of an overdose, and possibly in this particular case this may have been so, and the question then arises—How could the accident have been avoided? The answer to this involves a consideration of the whole principles of chloroformisation. Granting that an operation was necessary (and of that there was no doubt), and that chloroform had to be administered, all we could do was to follow rigidly the principles of administration ordinarily followed by SYME, LAWRIE, and their followers. The case was undoubtedly an exceptional one but if we once start creating rules for exceptional cases, a confusion will arise which will confound chloroformists, and hopelessly perplex the beginner. It might be said that *special* caution should be observed in a case like this, but we hold that without *special* caution in every case of chloroform administration the patient's life is placed in jeopardy. In this case the administration was superintended by Surgeon Lieutenant-Colonel LAWRIE himself, and in stating this we need state no more about attention as to the administration.

Then we come to the question—What is an overdose? As there is such a thing as an overdose in other poisons, so there is in chloroform. The proper quantity of chloroform in all cases is the minimum quantity that will produce narcosis, and maintain that state as long as is necessary. This must vary in different cases within wide limits, and just as there are certain people who require large doses of narcotic drugs to produce any hypnotic effect, whilst in others sleep is induced by a considerably smaller dose; so in chloroformisation some people (apart from idiosyncrasy, which is another subject) require large, and others small doses. It is well known that in some adults 15 grains of hydrate of chloral is sufficient to produce a whole night's deep sleep, whilst others require 30 grains, and even that dose repeated once or oftener. Now we know that chloral is converted into chloroform under the influence of the alkaline salts of the blood, and that the sleep produced may be looked upon as merely an early stage of chloroformisation, in which the surface grey matter of the cerebrum is narcotised. An overdose of chloral does not produce symptoms of syncope or indicate a primary cardiac failure. This demands our searching for some other cause for accidents.

A few years ago, I recorded a case of angina pectoris with fatty degeneration of the heart, coronary arteries, dilated aorta and dilated left ventricle, and in whom I had twice given chloroform. A year before for carbuncle of the head, the patient took the drug all right, and without a single bad symptom from start to finish on both occasions, although during one of these administrations he was half an hour under the drug.

As a rule, authors tell us that direct inflation of the lungs is only of use in the resuscitation of new-born

infants, but the condition is somewhat different in them and in aged people to what it is in the normal lungs of middle age adults.

The fluid having been removed from the abdomen in one case, the elimination of chloroform was comparatively easy under the influence of restored function to wider and wider areas of lung tissue.

In this little operation 2½ gallons of ascitic fluid were removed, and this rendered it possible for a proper diagnosis to be made. The tumour consisting of a large irregular mass springing from the left side of the pelvis, with a broad pedicle, and having wide and extensive attachments, both within the pelvic and the peritoneal cavities, it was decided not to attempt its removal.

The removal of the pressure from the vessels of the splanchnic area must have tended to reduce the high blood-tension in the lungs, and increase that in the splanchnic area itself, it thus lessened the chances of asphyxia, and at the same time reduced the distension of the right side of the heart, thus throwing less work on the right ventricle.

Chloroform was administered in the ordinary way, on a cloth cap-shaped like a cone, and as stated, produced no untoward effects for a certain length of time after the commencement of chloroformisation.

In this case there was every reason why the patient should suffer from heart failure (if such a condition is possible), and little reason why efforts for resuscitation should have been successful.

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OPHTHALMOLOGY IN OUDH.*

By MD. ABDURRAHIM KHAN BAHADUR, L.M.S.

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I DIVIDE nearly 2,700 operations performed on the eye-ball during the last 8 years at the King's Hospital, Lucknow, into (1) operations for cataract; (2) other operations on the eye-ball. But the subject of this paper is operations for cataract.

Examination of eye-ball.—Before dealing with the subject of operation, I would like to state very shortly, some facts about the examination or simple inspection of the eye bearing an important connection between it and the subsequent determination of the nature of operation to be performed and the course of after-treatment to be adopted. In doing this I shall describe facts which, if they escape notice at the time of inspecting the eye, cause failure after operation when everything seems to be going on favorably. The inspection is directed to (A) the appendages of the eye (B) the eye-ball.

(A) *Appendages of the eye.*—(1). Eyelids, (2) eyelashes, (3) puncta lachrymalis. (4) condition of the nasal duct and the nasal passages.

(1) and (2). Any altered appearance of the skin such as loss of thickness and elasticity indicated by hardness, toughness, induration, bead-like swelling, increased curvature of the nasal cartilage, increased vascularity, any undue moisture of the margins with occasional inflamma-

* Read before the Indian Medical Congress and sent to the Board for publication.

secretion, empty eyelashes, together with exudation of sticky secretion or contraction of the palpebral fissure, should always make us suspicious of a good result. A single inverted hair coming out at the time of operation gives any amount of trouble and annoyance after removal of the bandage. The corneal wound will not heal unless the small hair is detected and removed. Gummy secretions of an irritating character have caused sloughing of the eye-ball from the intense inflammation they give rise to after an operation. In such cases an operation for the extraction of cataract, if it is at all to be performed, should be done by an incision on the lower zone of the cornea.

(3) and (4). Any abnormal appearance about the punctum lacrymalis, such as redness of the orifice of the canal, indicated by a raised red spot about the inner end of the margin of the lids, attended with lachrymation either watery or of a slightly purulent character, with a little swelling about the sac, inflammation about the duct, or the nasal passages such as ozæna, or chronic coryza, should always keep us on our guard about the operative interference on the eye-ball. In such cases union of the corneal wound is prevented from irritation produced by the pent-up secretion between the closed lids. Sometimes the secretion finds its way into the anterior chamber, giving rise to suppurative iritis. In elderly subjects on account of the hardening of the tarsal cartilages, the punctum is displaced, and the canal obstructed with a constant flow of tears. In cases like these, the passage should be made free by passing probes for three or four days before operation. Cases with ozæna or chronic coryza can be managed by injecting the nostril with corrosive sublimate lotion and turpentine, and blowing into the cavity some iodoform or iodol. This should be continued regularly, for a few days after operation till the bandage is removed. Syringing of the nostril should be done gently so as not to irritate the eye. It is better to dust a little iodoform or iodol or fine boric acid on the dressing applied to the eye. In this way we manage to operate on cases with ozæna successfully. Cases with chronic inflammation of the sac should never be touched till the canal and the sac are corrected.

B. The Eye Ball.—(1.) *General appearance.*—In the out-door department among the crowd of patients we can tell a great deal about the general condition of the eye by noticing the peculiar attitude of a patient, e.g., an old man with a vacant look, head raised upwards, one hand stretched forwards walking with the help of his stick, is sure to be suffering from total loss of vision either from glaucoma, deep-seated retinal mischief, dense leucoma or disorganization of the eye-ball. While in another, walking with his head downwards trying to utilize the scanty vision at every step he takes, we can fairly conclude that he is suffering from cataract, corneal opacity or granular lids, &c. In the same way a young man with a prominent eye-ball partially closing his eyes every time he looks at a distant object, we are led to suspect myopia. In another patient with slight redness, the pupillary aperture comparatively small, pointed to the nasal side with a little wrinkling of forehead, indicates hypermetropia.

(2.) The movements of the eye-ball give us a fair estimation as to the amount of vision enjoyed by a patient

and the maturity of cataract can be estimated if we hold our hand or finger before a patient's eye and observe the side to side, for we observe that in a patient having a fair amount of vision the eye-balls keep pace with the movement. But in a case of mature cataract, the eye-ball will not move if the hand is kept at a distance of 10 inches to 2 feet. If after the extraction of cataract the eye-ball moves from side to side or from above downwards with the movement of the finger, we know that a fair amount of sight has been obtained.

(3.) *Tension of the eye-ball.* (4.) *Appearance of the Sclerotic.*—Besides the increased tension noticed in glaucoma, we notice a peculiar flabby condition in some eyes, indicating change of consistency of the vitreous. The vitreous in such cases has a great tendency to escape at the least increase of pressure produced either by the speculum or the fixation forceps. Very often when the corneal incision is completed, the lens is ejected with a quantity of vitreous. Great caution is required in manipulating such eyes during operation.

Thinning of the sclerotic indicated by the bulging out of the choroid which presents a bluish-white appearance in patch or patches, is an indication of defective or lost vision. The patient after an operation would always attribute it to something wanting in operation, and not to the morbid condition of his own eye.

Patients coming from out-stations should, as a rule, be allowed to take rest for 24 hours. In some cases, on account of exposure to wind, heat, or particles of dust finding their way into the eye, through want of proper rest during the previous night, anxiety, &c., we notice slight redness in the eye. Such eyes should be washed with boric lotion and treated with atropia before the patients are sent into the eyeward. In some patients, on account of a peculiar idiosyncrasy, we notice symptoms of belladonna poisoning from the small amount of atropia put into the eye. If an operation is performed half an hour after the instillation of atropia, the patient soon after the operation or sometimes on the table, complains of intense thirst, dryness of the mouth, at times he gets delirious and the dressing is disturbed. It is very difficult to keep him at rest, and such cases generally result disastrously. Of late I have been giving a 20 grains' dose of chloral hydrate, the patient after sleeping for four or six hours feels much better. Such an unpleasant mishap can be avoided by keeping the patient under observation for 24 hours before operation.

Operation for cataract.—In performing the operation for the extraction of cataract, our main object is to observe simplicity, avoid unnecessary manipulation of the eye-ball, and finish the operation with as little disturbance of its normal structure as possible. In a good and selected case we require few instruments. A sharp cataract knife, a pair of fixation forceps, a cystotome, a curette and a spring-stop speculum are all that is necessary.

The instruments are soaked in carbolic lotion of 1 in 100. Boric lotion of 5 grains to an ounce is used for the eye.

The eye may be anaesthetized with cocaine, but it is better to commence the operation without it. The cocaine is applied gently, the eye-ball is held by a firm grip

the eye is closed and an assistant is made to hold the patient's head steady. The patient is then placed with the point of the knife with the blade directed towards the anterior chamber. If we omit to do this, it may be pushed afterwards with the pricker. As the operation completes the incision we should be careful not to press the eye-ball with the fixation forceps, as sometimes when our whole attention is directed to the completion of the incision (without giving any jerk to the eye ball,) we quite forget the pressure exerted by the fixation forceps in the left hand. At times this unconscious pressure is enough to rupture the hyaloid membrane and cause the escape of vitreous. The incision completed and the sclerotics pricked either with the point of the knife or the pricker, the speculum is removed. The lens is extracted by a gentle and gradual pressure of the eye-ball at the lower part of the cornea with a curette applied to the outer surface of the lower lid about the margin; the pressure is applied from below upwards. If necessary counter-pressure may be applied a little above the incision by gently pressing the upper lid with the tip of the forceps or by means of a curette applied directly to the eye-ball. Thus by gentle pressure and counter-pressure the lens is made to glide out smoothly. During this part of the operation the patient is told to look downwards. If a portion of the iris during the extraction of the lens is displaced upwards or caught, as it sometimes happens, between the flaps of the wound, it is replaced by means of a curette passed gently into the wound by a light lateral movement. In a good case we should find the pupil quite clear and the vision fairly good to the counting of fingers. Sometimes we find some lenticular matter left behind; it is removed by gentle pressure applied as above described. We should be very particular to syringe out the anterior chamber with boric lotion. The author usually employs a small silver capillary tube about one and a half inches long, one end of which is expanded into a tube of about $\frac{1}{4}$ or $\frac{1}{2}$ of an inch in diameter to which an india-rubber teat or an ordinary india-rubber tubing about two inches thick is attached and fixed by silver wire. The other end of the tube is made airtight by a few turns of silver wire. The lotion is sucked up into the tube and then injected into the anterior chamber in a fine stream which is strong enough to work out any lenticular matter left behind. In syringing the chamber we have another advantage; at times, a portion of the capsule which remains behind the iris is brought into view by the force of the stream. Sometimes the stream can easily suck up this portion of the capsule or lenticular matter into the tube and thus extract it. The operation being finished, the eye-sight is tested by holding the finger before the eye. A drop of astringent solution of 4 grains to the ounce may be put into the eye if necessary.

After protruding the iris, the forceps are used to grasp the iris with the knife with, holding the patient's head. After carefully examining the cornea, when the edge of the pupil is protruding, the point of the pointed straight, gently the knife is applied with the knife for a horizontal incision of the iris, which a piece of iris tissue is kept at the knife with a watch pocket, the edge of the knife is then directed a little upwards and the incision is completed; a crescentic or crescentic piece of iris is then divided, while the rest is the anterior chamber either on the left or right. The length of the pupil. If there is no hemorrhage, the iris is cut at the ends of the iris, it is quite viable; it is easier to be removed with the iris forceps. When there is a little hemorrhage, the anterior chamber is syringed and the entire piece of iris washed out with the lotion. While operating on eyes under cocaine, or when the patient is not anesthetized and does not keep the eye at rest, this way of cutting the iris answers the best. After finishing the operation, the pupil is pricked and the lens extracted as described above. The anterior chamber being washed or syringed, the divided ends of the iris are replaced carefully and gently with a curette or spud into the anterior chamber, and a drop of atropine solution, if necessary, put into the eye. This finishes the operation.

Of the 1,250 cases of cataract extraction which have come under my observation, 610 were performed without iridectomy, yielding 97 per cent and 640 with iridectomy, resulting in 83 per cent of cases with good sight. My practice leads me to conclude that cataract surgery without iridectomy is safe, and that it is possible to operate without iridectomy in at least 80 per cent of cases coming for treatment in our hospital. In determining the question of operative without iridectomy the following points should be carefully noted:—(1) The extent of maturity of the cataract, the size of the lens, the condition of the nucleus and the optical media. (2) If there is any adhesion between the iris and the lens.

The patient is told to adjust the eye as if looking on a near or distant object, or when the eye-ball is closed with the palm of the hand for a minute and then suddenly opened towards the light, the dilated pupil will contract slowly; the lens is generally white, yellowish-white or milky-white, presenting a hyaline or ground glass appearance, at times white dots are noticed on the surface of the lens, in some cases the nucleus is found floating in a bag containing milky fluid, and the radiating striae are seen. In such cases we know that the lens is of small size, there is no adhesion, and the patient quite mature. If iridectomy on such cases is performed, there is every chance of the vitreous escaping. These cases should be selected for operation without iridectomy.

(3). A small eye-ball, a little sunken in the socket, having the characteristic appearance of a hypermetropic eye, the palpebral fissure a little contracted, sometimes the outer angles of the eye on a higher level than the inner, the inner angles appearing as if pointed towards the nasal side, the eye, as a whole, lacking lustre, the pupil more inclined to be contracted but responding freely to the effects of light, the appearance of the lens generally of a bluish-white, grey, brownish-white, or of a dirty brown color presenting radiating striae more visible by throwing light at different angles when the pupil is dilated with atropine. These eyes possess big lenses, probably with some adhesion of the iris. In such cases the incision should be made a little larger, and iridectomy must be performed.

The anterior chamber, after removal of the lens, requires careful examination. It should be washed out thoroughly. Some particles of lenticular matter is generally left behind, even after thorough washing of the anterior chamber. It is in these cases that after removing the bandage, to our great disappointment and annoyance, we find some white swollen lenticular matter occupying a portion of the pupillary aperture which escaped notice at the time of operation. In such cases we should not only perform iridectomy, but be ready to enlarge the incision or even scoop out the lens, if it refuses to move with ordinary pressure.

(3). There are cases of mixed type in which no rule as regards the performance of iridectomy can be laid down. The nature of the operation should be entirely left to the skill, knowledge and taste of the operator. Every case should be treated according to its own special features. A greater number of these cases can be treated by operation without iridectomy.

After care and treatment.—In a case without iridectomy the bandage should be applied with a light but firm and equal pressure on the eye-ball. The patient is generally sent to the ward on a stretcher. He is properly kept on his back undisturbed for 48 hours. He is not allowed to go home after the operation. If there is no discharge, the bandage is not removed till the morning of the sixth day, and on removing the bandage, we note the condition of (1) the conjunctiva, (2) the corneal wound, (3) the pupil, (4) the sight. In good cases there will be:—(1) no discharge or conjunctivitis, (2) the wound fairly united. In some elderly subjects the union of the wound is not

perfect, and then the bandage must be reapplied, the eye retired and clear, (3) vision good.

Should any complication arise, such as conjunctivitis, iritis, or prolapse of the iris, it must be treated on general principles.

In cases where iridectomy is performed, we are not particular to apply any pressure on the bandage on the eye-ball unless there has been an escape of vitreous during the operation. Sometimes we apply a four-tailed bandage of two folds of muslin. The patient is allowed to walk in his bed or we can allow him to go home if he does not like to stay in the hospital, giving necessary instructions as regards rest and dressing. He is allowed to leave the hospital after 48 hours. The eye, if there has been a discharge, is washed without opening the lids after 24 hours and the dressing re-applied. On the morning of the fifth day the eye is opened and examined as above.

In cases with diseases of the secreting apparatus the dressing is changed every morning. The average duration of a patient's stay in the hospital is from 9 to 12 days.

THE CAUSE AND PREVENTION OF CHOLERA.

By E. H. HARRIS, M.A.,

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The causes of Disease.—Everyone must be interested in the methods of preventing those fearful plagues that sometimes occur in India, which bring with them such loss of life, distress, and misery.

At the present time doctors are beginning to understand the nature of these diseases, their causes, and the means of preventing their spread. I intend in the present article to give as simple an explanation of these matters as possible.

The subject is interesting to the people of India from another stand-point, because, as will be seen, many old customs are nothing else than excellent means of preventing the diffusion of disease. Some of these will be mentioned herein, especially in connection with cholera, as the causes of this disease are now best understood.

To discover the nature of disease, before all things, it is necessary to use a microscope. By means of this machine it is possible to see things a thousand times larger than they really are. The hair of the head, when looked at with this machine, seems as large as a tree. By means of the microscope, it is possible to see a whole world of small animals and plants that exist in dirty water, and any one of which is so small as to be invisible to the naked eye, and so small that they cannot be removed by straining through the finest cloth.

If the body of a man dead of cholera is examined, and a small drop of the contents of his intestines is examined with the microscope, it is seen as composed of thousands of a minute living creature, possibly a bacterium, and properties, and which is only to be removed by washing with disinfectants. It is now known that cholera is a living being in the form of a bacterium. It is a very small

Although much is now known as to how the cholera microbe grows, it is difficult to say whether it is a parasite or not. It can move with great rapidity in water, and therefore is like a fish. But it is different from fish, or from any animal, in that it has no mouth. It is to say, it cannot eat solid matter. Its food is first dissolved and then absorbed. They are aquatic and found in well water. Then it often happens that persons using this well will get cholera. It is well known that the symptoms of cholera are like those produced by eating poison, so much is this the case that it has been supposed that cholera is caused by a poison. It has been proved that just as a snake secretes a snake poison, so the cholera microbes when in the body, secrete a poison, and to this poison the symptoms of the disease are due. It is not always that the cholera microbe makes the disease, just as a cow only under certain conditions secretes milk, so only under some unknown conditions the microbes of cholera have the power of secreting their poison and of producing the disease.

The symptoms of the disease do not appear immediately after swallowing the cholera microbe. It needs some time in which to manufacture its poison and to grow and reproduce. Then only does the harvest of symptoms appear, in the same way as the crops do not appear till some time after the seeds have been sown. It is probable that, as a rule, cholera appears three days after the water that causes it has been swallowed.

I have said that these causes of disease are small living beings, in some respects resembling animals, in some respects plants. How do they live? Firstly they need food. Their food is dirt. If they are in water in which is much dirt, the cholera microbes can quickly grow and reproduce. If at this time such water is examined under the microscope, the cholera microbes may be seen in the form of small curved rods. They are so small that if 50 of them are placed in a row end to end, they make a line whose length is equal to the thickness of a hair. If one of these cholera microbes is noticed carefully, it will be seen to grow longer and at length to break into two equal pieces. Each of the minute curved rods thus formed is a cholera microbe. Each again grows longer and in about half an hour will, in turn, break in two and again two daughter microbes will be produced from each individual. Thus it may be understood how these minute creatures, though they have no sex, nor lay eggs, are able to reproduce with great rapidity. If a trace of the cholera microbe is put into suitable water, that is to say, water containing dirt, the microbe may reproduce with such facility that on the following morning the liquid is turbid, because in every drop are many lots of these creatures.

It often happens that the bodies of persons dead of cholera are thrown into the Ganges. Therefore the cholera microbes often get into its water. If this is the case, why is it that no one ever gets cholera by drinking the flowing water of the Ganges or Jamuna? The answer to this question is, that there is no dirt suitable for the cholera microbes in the water of these rivers, except near large towns or at the time of the great annual festival. Consequently, if the cholera microbes get into their water, it is only near the cities or at the festival. If, on the other

hand, the cholera microbes get into the water of a well, it finds much dirt which acts as its food and consequently it quickly grows and reproduces. If the sediment in such a well is examined under the microscope, it is seen to consist of small bits of clothing, small pieces of human skin rubbed from the hands by the dirt, and many other particles of animal origin. If the sediment in the water of the Ganges is examined, no such particles are seen, except possibly at great bathing ghats at times of pilgrimages. On the contrary, the mud that is carried along in the current of the river is seen under the microscope to consist exclusively of small fragments of stones and sand. No particles of animal origin will be discerned, and consequently no food for the cholera microbe is present. The cause of this is manifold. One cause is the purifying influence of air and sunlight, which agencies have the power of destroying every bit of dirt.

The prevention of disease.—It is then probable, from what has been said above, that if the water of wells could be made to resemble that of the Ganges and Jamuna, cholera would greatly decrease. So far as the prevention of dirt is concerned, this can be done by adding to the water various medicines. For instance if a small quantity of alum is added to turbid water and well mixed with it, all the floating particles will be seen to be carried to the bottom and the water will become clear. I have heard of one or two instances in which cholera has ceased after this was done. But I believe that a better medicine for this purpose is potassium permanganate. This is a salt-like substance in whose preparation only acids and mineral substances are employed. It readily dissolves in water, giving it a purple colour. It has such a great power of colouring water that a touch of the medicine is enough to give a pink color to all the water in a well. But the color does not stay permanently. The medicine destroys the dirt that is present, and in doing this is itself destroyed and the color vanishes. If this process is observed in a glass, after sometime a brown sediment will be seen to appear. This sediment consists of the medicine combined with the dirt that may have been present floating in the water. Thus though no change is seen at this time be visible in the water, there is this difference, that before the addition of the medicine there was some unclean substance dissolved in the water, but after the addition of the medicine there is no dirt present in the water. Both this and the medicine will have sunk to the bottom.

In order to cleanse a well with this substance, it is necessary to add enough of the medicine to give a faint pink color to the water. For an ordinary well this will be one or two ounces. The permanganate should be added at sunset, in order that the water may be left undisturbed as long as possible. In this way the sediment will have more time to settle to the bottom. On the following morning, the water will be fit to drink. If a faint red colour still persists this day after sunset, or the substance is not potassium when that day comes, the water is not pure and the person who objects to take it should be the health of those persons it will be better to take the water out of the well until all color has disappeared.

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There is a popular belief, however, that the cholera microbe is not so easily killed as it is often supposed to be. The cholera microbe is not so easily killed as it is often supposed to be. The cholera microbe is not so easily killed as it is often supposed to be.

Prevention is better than cure. It is better to prevent the cholera microbe from getting into well water than to try to prevent its doing harm when it once gets there, by removing its food. In order to prevent the cholera microbe from getting into the wells, I can suggest no better remedy than certain customs that already exist in India, and which, if they were more generally observed, would undoubtedly have a more beneficial influence than is the case at present.

Firstly, it is now well known and proved that the cause of cholera is often carried from place to place by travellers. It is now known that the cholera microbe lives for the most part in water, and there is no doubt that travellers bring the disease into a place by putting the cholera microbe into the well water of the places to which they come. This they probably do by means of the *dols* or *lotes* that they carry with them. For instance, a short time ago I had to investigate a cholera outbreak in a hospital for English troops in Lucknow. It was found out that a few days before cholera appeared in the hospital, a Hindu had come into residence in a neighbouring compound. The best well in the place was used for drinking purposes, and there can be little doubt that the Hindu went to this well to get his drinking water. Two days after his arrival, he was attacked with diarrhoea, which some time later developed into cholera. With little doubt the Hindu had become infected with the microbe of cholera during his arrival in that place. Then he became ill and fell into the well. After this, cholera appeared among the patients in the hospital, who drank water from the same well.

In some districts during the hot weather, a hired Brahmin with a *dol* and rope is stationed by the side of the well for the use of travellers. By thus preventing the travellers from using their own *dol* or rope, they greatly lessen the chances of the well becoming infected with the cholera microbe. In other districts I believe it is customary for the villagers to keep persons on the high road who draw water and give it to travellers. These customs appear to me to be most excellent, and tending greatly to prevent travellers from carrying cholera from place to place. Another custom that appears to me to be of great value, when the infective material is present in a village, is that of not allowing any cattle or horses to come near a well containing drinking water. Such persons fear that the animals will come into contact with dirty water, and so they try to prevent the cholera microbe from getting into the well by keeping the animals away from the well.

For the same reason, it is better to prevent the cholera microbe from getting into well water than to try to prevent its doing harm when it once gets there, by removing its food. In order to prevent the cholera microbe from getting into the wells, I can suggest no better remedy than certain customs that already exist in India, and which, if they were more generally observed, would undoubtedly have a more beneficial influence than is the case at present.

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Thirdly, it is now well known and proved that the cause of cholera is often carried from place to place by travellers. It is now known that the cholera microbe lives for the most part in water, and there is no doubt that travellers bring the disease into a place by putting the cholera microbe into the well water of the places to which they come. This they probably do by means of the *dols* or *lotes* that they carry with them. For instance, a short time ago I had to investigate a cholera outbreak in a hospital for English troops in Lucknow. It was found out that a few days before cholera appeared in the hospital, a Hindu had come into residence in a neighbouring compound. The best well in the place was used for drinking purposes, and there can be little doubt that the Hindu went to this well to get his drinking water. Two days after his arrival, he was attacked with diarrhoea, which some time later developed into cholera. With little doubt the Hindu had become infected with the microbe of cholera during his arrival in that place. Then he became ill and fell into the well. After this, cholera appeared among the patients in the hospital, who drank water from the same well.

If these rules were observed with exactness, it is difficult to see how cholera could spread from place to place. It ought to be possible to observe such rules because they are founded on customs that have existed in India from ancient times, and are little more than an appeal for the more strict observance of rules that already exist, and which are shown to be rational by the description of the nature of the causes of cholera at the commencement of this paper.

How does a native of India give water to another to drink? He first draws water in a *dol*, then he takes the water from the *dol* in a *lot*, and pours it into the up-turned hands of the man who wants a drink. If you ask him why he does not pour the water direct from the *dol* into the man's hands, he will reply that he is afraid that some of the water might splash back from the man's hand on to his *dol* and thus lead to a pollution of the water. What is meant by this "pollution"? If the hands of the man who receives the water were washed in the strongest poison known, is it possible that the smallest drops that might splash back on to the outside of the *dol* could be harmful to the water that was in the *dol*? I am sure that no such poison is known. If this is so, it is to be feared that the good custom of the natives is not to be followed. The good custom of the natives is not to be followed. The good custom of the natives is not to be followed.

persons but which bring along with them many millions of germs of cholera, and which are so small that the smallest drop of water may contain many thousands of them. Thus the drop of water that might splash from the man's hands on to the *dol* might be enough to infect the whole water in the well and thus cause cholera. Just as the "germs" or "germs" weighing only a part of a tola may cause the change of many seers of milk into *doh*, so a mere trace of the cholera microbe that might get into a well from a defiled *dol* might cause the change of all the water that the well contains into a liquid capable of giving cholera to every one that drinks it in sufficient quantity.

Thus this custom appears to me to be good, but it might be more valuable if it were more carefully observed. I know that some care is taken that the iron *dol* in which water is drawn should be used for nothing else, and Muslim *dhokees* do not allow other people than themselves to touch their *mussacks*, but further care should be taken that such utensils are preserved from pollution. I have seen women going to a well carrying a *ghurra* on their heads and a *dol* in their hands and taking no care that the *dol* should not touch their *langha* which probably was far from clean. Further, it sometimes happens that the *shabutra* of a well, and the ground that surrounds it are dirty, and I doubt whether sufficient care is taken in not placing the *dol* on such dirty places.

Owing to the purposes to which they are put, the *lotah* is far more likely than the *dol* to infect a well. Sometimes in villages these vessels are not lowered into wells used for drinking purposes. At *melas*, on the other hand, I have often seen both *dols* and *lotahs* being lowered into wells at the same time. Much good would be done if this could be prevented, and if Brahmins could be employed to draw water for pilgrims for all purposes, or if a tank with a tap, from which *lotahs* could be filled, could be placed near every well.

In order to prevent cholera, the Government are employing certain new methods which have hitherto been unknown in Hindustan. Especially to be mentioned is the introduction of pipe water into the larger towns. Often the nature of this water is completely misunderstood by the inhabitants. In Agra, for instance, some persons tell me that they cannot drink this water because it is hot; others tell me that they cannot drink it because it is cold; others because it comes out of a pipe that has been used by persons of lower caste. I have quoted our recent knowledge of the nature of disease to show that many of the existing customs are good. I can quote the same knowledge to show that the above objections are bad. The pipe water is water that has been carefully filtered with much trouble and care in order to remove from it the minute living germs that are the causes of disease. The process of purification is too complicated to explain here, but it may be stated that the sand that is used to filter it is washed by machinery in order to avoid contact with human beings by which it might possibly be defiled. Thus even a pipe with side water, that pipe water always contains far fewer of the minute living beings above described than the water of the *dhokees* or *Jaams*, and thus is better than any that can be obtained in India, so far as

the question of disease is concerned. I have above explained why it is good to object to water from the hands of a man of low caste splashing on to the outside of a *dol*, but I can find no equally good reason for objecting to such water splashing on to the outside of the pipe of a stand-post. In the first case, each splashing is dangerous because the *dol* will be lowered into the well and will possibly infect the water-supply. In the second case I fail to see how drops of impure water on the outside of the pipe could possibly infect the water flowing through it, at any rate, if care be taken that the vessels in which the water is taken away, are not allowed to touch the pipe.

But the neighbourhood of a stand-post should be kept clean, as when the water is not flowing, there is the possibility of dirt being sucked back into the pipe.

In some villages Government are introducing pumps attached to wells. If the walls of a well are good and in good repair, there is no doubt that all substances that can get into the water must come in from above by means of the vessels lowered into the well. Consequently, if the well is covered in, and if water is only raised by a pump, no harmful substances can get into the well, since water only flows in one direction through the pipe of a pump. Pumps for this purpose are now being brought into India, which, like the large pumps in the water-works, contain no leather in their valves, and I feel confident that if it turns out to be possible to introduce them into villages, much benefit to the inhabitants will result.

I have referred to many customs in this paper which, if they were more closely observed, would be of great use in checking the spread of cholera. Though educated persons may be able and willing to adopt these suggestions, it is probable that uneducated persons cannot easily be influenced in this way. But I feel sure that educated natives who read this brochure will be able to see, from their knowledge of the natives of India (which is greater than mine), how far these suggestions are practicable, and such persons are likely to do good if they exert their influence to a greater extent than they do at present to ensure the purity of the water-supply, or if they cleanse the wells with medicine as above described, if they have become infected. I have not attempted to include in this book certain other measures that without any doubt would be of great use in order to prevent the spread of cholera. For instance, since these minute living organisms that cause diseases are destroyed by boiling, safety in a cholera epidemic can be obtained by drinking only boiled water and food that has recently been cooked or warmed. But this for many poor people must be practically impossible owing to the difficulty of obtaining fuel. Neither do my remarks cover the whole of the ways in which cholera may be brought on. Since the cholera microbe is destroyed by drying, there is no doubt that the disease is never caught by inhaling air. It is a disease whose cause is always in the substance eaten or drunk. Generally the disease is contracted by drinking water that contains the infective material. Sometimes however, it is contracted by eating infected food. This is likely to happen in dirty places where there are bad smells and many flies. The cholera microbe is always present in quantities in the stools of persons suffering from the disease. It is now known that flies settling on these stools may carry the disease germs from place to place and deposit them as food and thus the cause of this terrible malady may get into the system and cause the disease.

THE CLIMATE OF NEW SOUTH WALES.

By J. ABERNATHY THOMSON, M.B., D.P.H.,

*Chief Medical Inspector of the Board of Health,
New South Wales.*

Persons who have never visited Australia, sometimes ask what sort of climate it has. A fair answer would be "All sorts;" for they forget that it is a continent which measures nearly three million square miles. It lies between the 11th and the 39th parallels of south latitude, and between the 118th and 153rd meridians of east longitude.

Wide differences, mainly of temperature, are indicated by the number of degrees of latitude through which Australia extends; roughly speaking, its northern third lies within the tropics, its southern two-thirds outside them. The meridians of longitude serve to measure differences of another kind. In the southern hemisphere rain comes from the east, consequently the eastern coastline which borders the colonies from north to south, of Queensland, New South Wales, and Victoria is the fertile portion of Australia. The rainfall is greatest there, and diminishes farther and farther towards the west; rapidly at first, more gradually as the western plains are traversed.

I wish to speak now of a portion only of this vast territory—of the climate possessed by New South Wales. A slight description of the physical features of this province will make it easier to understand the favorable varieties of climate which exist, even within the bounds of this limited portion of Australia. New South Wales lies between the 29th and the 36th parallels of south latitude, and the 153rd and the 141st meridians east of Greenwich. It has a coast-line to the Pacific of about 700 miles. It is naturally divided into three zones by the dividing range which runs north and south parallel with the coast, and at a distance from it, which is sometimes as much as a hundred miles. This sea-ward belt of country is called the coast-zone, and it has an area of 38,000 square miles. Narrow valleys and deep gorges lead up the eastern face of the dividing range to the tableland zone, which stands at an average elevation of 3,000 feet above the sea; it is about a hundred miles wide, and measures 65,000 square miles. Gentle slopes conduct from it to the great plains of the western interior, which have an area of 188,000 square miles. It will now be plain, that the climate of New South Wales must be spoken of in relation to these three zones primarily, and with subsidiary reference to latitude.

The following details of temperature and rainfall have been taken from accounts published by the Government Astronomer (Mr. H. C. RUSSELL, C.M.G., F.R.S.). The climate of the coastal zone is milder than that of corresponding latitudes in the northern hemisphere, and the range of temperature is not great. Thus, at the northern extremity of this zone (E. lat. 29°) the climate, as inferred from latitude, should resemble that of Delhi, or on the Gulf of Suez; yet in fact the mean temperature there is but 67°-5, or only 1°-7 above that of Meadna, a spot 2° farther from the equator. Similarly, at the southern extremity of the coastal zone the mean temperature might be expected to be much above 60°-2, which is what it actually enjoys, and which is practically the same as that

of Rome, a city placed 42° miles farther from the equator. As also at Sydney, the capital (population 300,000), which is seated on the coast of south latitude 34°-35°, the mean temperature is 63°-9, or about the same as that of Florence and Toulon. The mean summer temperature being slightly under 71°, that of winter 54°. And this comparison brings out a most important point for those who would choose their climate—namely, the unusually small range of 17° only. The extremes must also be mentioned. The greatest summer heat ever experienced in Sydney was 106°-7, the lowest winter temperature 25°-9; but it must be pointed out that while these extremes are very seldom indeed so much as approached and frost (even according to the extreme for 33 years or continuous observation) is unknown, the heat of summer seldom exceeds 90°, and is found disagreeable by Europeans on account of moisture of the atmosphere only for two or three days at a time about in the middle of summer.

On the tableland zone the yearly average temperature is barely 56°; the mean summer temperature only reaches 69°, that of winter 45°-9. At that elevation and distance from the sea the range is naturally greater, though still low; frosts are common in winter, and snow sometimes falls. Thus, even in summer, the coast-zone dweller can by a few hour's railway travel get a bracing change, and in winter as low a temperature as he is likely to find agreeable, accompanied though it generally is by sunshine and a transparent atmosphere.

As to rainfall, the yearly mean at Sydney (33 years) was 49 inches, which fell on 151 days; while on the tableland it averaged 81 inches. At Sydney the average annual evaporation calculated on the same period was 38, and it varied between one and a half during the winter months of June, and five and a quarter during the summer months of December and January. On the whole, the climate may be described as one of the most equable; yet it is also one of the most agreeable, for, as has been shown, appropriate seasonal changes occur.

Probably these facts, which result from Mr. RUSSELL's long-continued and well-known observations, do not convey to the unversed reader any very distinct impression of the conditions of life actually met with in New South Wales, and at last that special point, the capital. But it is necessary to furnish a check on expressions of personal sensation, and the more that terms which cannot but be brought to verge on the enthusiastic must be employed by any writer competent to describe them. Without venturing on that ground, some sober facts can still be adduced by way of useful practical illustrations. Briefly, the climate of the coast-zone invites to open-air life all the year round; neither the heat of summer nor the cold of winter interferes with athletic sports, or shooting, or fishing, or yachting—shall it be added here, or with more serious occupations? Europeans at Sydney were the ones they have been accustomed to in their own more changeable and colder climates. In summer the lighter kinds of cloth are chosen, of course, and waistcoats may be omitted; yet as an ornament displayed by one comes only. On the other hand, during the winter months a great deal of the same garment is worn; it is seldom really required except in storm, or for the frosts,

...at night. But the traveller who... during the winter needs heavy... for use by night during five or six... of the year. So that many are dwelling on the coast... exhausted by the moderate heats of summer, he can in a couple of hours reach an altitude of 4,000 feet, and a temperature in which blankets at night are a necessity. Fogs are scarcely known anywhere; and though the sky is not constantly blue—which would be a phenomenon even more fatiguing in the long run than constant clouds—yet the atmosphere is such that all shadows are transparent, and the color of distant objects can be distinguished as far away almost as their forms are visible.

The happiest combination of all that is best in warm and in cool climates, prevails in New South Wales. There is a spot among mountains where Norwegian settlers exercise perforce on national snow-shoes during four months of the year. Elsewhere, and there alone in Australia, do the pure skies and golden light of the tropics concur with an invigorating air; there alone do the orange and the hardier fruits of northern Europe flourish almost within sight of each other. Spontaneously in that brilliant environment the mind turns to all that is associated in art and song, and games with classic Greece.

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ANOTHER DAY WITH PROFESSOR HAFKINE.

By ALF. MCCABE-DALLAS, L.M. Dub., L.R.C.P. &c.

Kumbhur.

CONTINUING the subject of inoculation against cholera by DR. HAFKINE, who recently returned and repeated the second or final process on those whom he operated before, I described how the solution was prepared in the first instance, but omitted to mention that the microbe having been deported from Saigon in French China to Paris, was cultured in the Pasteur Institute, brought from thence to India by HAFKINE, and the supply maintained by the tube-to-tube development on agar-agar. On the present occasion in Cachar, the comma was secured from the soiled cloth stained by the intestinal evacuation of a patient who had died from the disease. Scraping off a portion, it was put under the same high power microscope to be recognised and separated from any other germs which may be in the field. It was then transferred under every bacterial care to a tube of agar, where after multiplying itself most prolifically, was suspended in sterilised water and injected into the peritoneum of an adult guinea-pig by a straight needle Hypodermic syringe. No incision was made to reach the part, as HAFKINE by manipulating the animal's abdomen with his fingers was able to recognise the object required. The intestine was not pierced. The danger of a straight needle is that the animal in its struggle is likely to have its bowel wounded, and this has to be avoided. Dr. BACON has invented a curved needle which, being placed at the point, has its eye in the middle, time in passing the gutters; the needle can be pushed out in a curve and withdrawn after the fluid has been injected, without any fear of injury to the intestine.

The strength of the comma is measured according to the time the guinea-pig takes to die, and the course of death

is, so short, due to the influence of the generated poison on the sympathetic nervous system, there not being any trace of cholera indolence during life, except a perceptible fall in temperature. It invariably necessitates four guinea-pigs being inoculated to attain the requisite degree of intensity unless the second or third die within the prescribed time of eight hours. This is about the limit fixed, and usually the first pig expires in 26 hours, the second in 15, the third in 12, and the fourth in 8 hours—the lowest level at which death can be obtained under ordinary circumstances—but in some peculiar cases of idiosyncrasy it might occur earlier, or not at all. The animal appears to experience no inconvenience of completion of the injection, as it moves around quite freely and eats, neither any symptoms indicative of suffering, and death seems too vertice it in a very quiet manner. On the expiration of 24 hours *post-mortem* is performed, and the contents of the peritoneal cavity abstracted, in the form of a pinkish opaque fluid, which is literally swarming with cholera microbes. The contents of the bowels, which have assumed a liquid condition, are left undisturbed as nutrient material, free from the comma. The microscope is set to work again, the microbes transferred to tubes, and the resultant matter eventually shaken up in sterilised water, is injected into the individual in the same way and quantity as the first inoculation; the same kind of pain and fever following. Protective influence is now supposed to exist for seven years; but, like small-pox, cholera may attack in a modified or mild state. The second inoculation therefore differs from the first in the culture being maintained from tube to guinea-pig and *vice versa*, instead of merely from tube-to-tube, although in both methods an original microbe from actual cases of cholera was used. In refusing to do the second inoculation without having done the first the reason is not because of risk in producing cholera, but the seat of an injection is likely to terminate in a large slough. The measurements of a comma bacillus are: length $\frac{1}{1000}$, diameter $\frac{1}{1000}$ of an inch, hence it would need 75,000 to cover a square inch of surface, and what the number might be to occupy a cubic inch of space would easily startle the most sceptical imagination!

There are conditions under which the comma is rendered sterile for the time being, and which disturbs and affects its natural habit in propagating its species for no other purpose apparently than that of committing mischief on mankind, for instance, it ceases to exist in the presence of an excess of oxygen, also carbonic acid; soda water obtained from a reliable source and retained a few days before use is, owing to the gas of the latter and pressure combined, deemed sufficient to destroy its life, if by any means it found its way into a bottle. Pressure of a hundred atmospheres has the same effect in a short time, although the immediate result is merely to suspend its potential functions. Stagnant pools and drains, low muddy bedded rivers, dark wooded walls, and exclusion from light, are places it revels in, while mountain streams, springs, and rivers with gravel or rocky beds, are localities it scrupulously endeavours to avoid, and more so in ratio to the rapidity of the current. Nitric acid keeps him in a latent state and prevents culturing in such media, while the phosgene, or carbolic acid, are the most deadly enemy.

It is hoped the promoters of this new discovery will be able to give more definite demonstrations in explaining the physiological value of its effect on the system to secure public confidence, and that its end will not terminate as K.M.'s tuberculosis is being converted into a sort of antitoxin through the medium of a horse. Naturally experiments are essential to prove facts, but when, as for cholera, they have to be performed twice over, it causes the natives, for whose benefit these performances are doubtless being carried on, to exhibit a certain amount of scepticism, unfortunately for the benefit of this scientific undertaking. Cholera has suppressed itself so far that no comparison can be made, which must be attributed to the extra precautions in the sanitary line adopted on estates, where the drains have been deepened and properly sloped, wells cuplied, cleaned, and lime and permanganate of potash put in every mouth alternately, more light and ventilation insisted on and less crowding in huts, and wholesome water supplied to field workers, instead of allowing them to drink from unknown sources.

A MIRROR OF PRACTICE.

HEPATIC ABSCESS FOLLOWING ULCER OF DUODENUM CAUSED BY A BURN.

By SURGEON-CAPTAIN PATRICK HEHR, M.D.,
F.R.S.E., F.R.C.S.E., D.P.H. (Cantab.)

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On the 4th April 1894, Mr. U. R., of the Regular Troops, sustained a very severe burn by the explosion of a kerosine oil lamp, the burning oil falling on various parts of the body and igniting the clothes which burned until they were extinguished. The chief parts affected were: (1) Face, scalp, and front of neck. (2) Trunk, especially the middle line anteriorly, extending on the right side from the clavicle to the 9th rib, and on the left over the area corresponding with the anterior part of the left hypochondrium. Small patches of the right lumbar, iliac and the hypogastric regions were also involved. In addition to these both forearms and hands were covered with several large blisters, the back of the hand being involved to the depth of the true skin, which was greatly charred on its posterior aspect. The left leg, foot and toes were also affected.

The patient was seen within 20 minutes of the occurrence, and was found in a semi-collapsed state. Morphine and atropine were at once injected hypodermically, and the burned surface covered with caron oil. On the 9th day after the accident the patient complained of a pain over the epigastric region, which gradually extended till it occupied the whole of the anterior part of the abdomen above the umbilicus. Pressure increased it, especially in the epigastrium, as did also coughing, deep breathing, or lying on either side. There was fullness of the liver, but no actual hypertrophy, and no pain on pressure.

On the 10th day after the accident vomiting set in, and after continuing for 24 hours, became somewhat bloody. On the 12th day diarrhoea began, the motions at first of

semi-liquid consistency, becoming whitish and watery, and on the 16th day the dejecta contained blood and mucus intimately mixed with faecal matter, but none of the ordinary symptoms of dysentery were present. There were about 10 motions a day.

On the 21st day he had very severe hæmorrhage, which was checked by the use of cold externally, ergot, hæmeline and turpentine internally. From this time onwards the patient seemed to recover without another bad symptom, and on the 35th day after the explosion returned to duty, and continued to work for 18 days. He was then attacked with acute croupous pneumonia, which ran the ordinary course of that disease, but after the crisis he did not appear to convalesce as satisfactorily as one would wish. The cough continued, he had diffused pain over the whole of the base of the right lung anteriorly and posteriorly, and there was a perceptible bulging below the lower angle of the right scapula. Nor did the inflammatory deposit of the right lung clear up—bronchovesicular, respiration and bronchophony continued, and there was dulness. This was his condition on the 27th June, exactly a month from the beginning of the pneumonia. Thinking that there was some fluid in the pleural cavity, we inserted an exploring hypodermic syringe, with which we drew off 6 ounces of inflammatory fluid. This gave no relief. The temperature was constantly over 100°F. in the morning, and 101.5° or thereabouts in the evening. He was almost constantly in a profuse sweat. This was manifest chiefly at night, and aroused our suspicion as to the possibility of suppuration in the liver. Four days after the aspiration of the chest he had severe and prolonged rigors in the afternoon, and another about 11 P.M.; the temperature rose to 104.6 at 5.30 P.M., and subsided to 100.5 at 9 P.M., and again at 2 A.M. was 103°, whilst at 8.30 A.M. the following day (10th July) it was 99.5 F. Between each rigor there was profuse perspiration. He now first began to complain of severe pain over the liver and lower border of the chest walls posteriorly. Whilst the lower edge of the liver could be distinctly felt anteriorly, especially during inspiration. There was manifestly no very great enlargement, the dulness not going beyond the fifth rib anteriorly. These symptoms continued for another week, when the liver began to increase considerably in size, the cough became more severe, dyspnoea set in, and severe vomiting occurred during each exacerbation of temperature. I entertained no doubt but that there was pus in the liver, and as this organ increased in size, my conviction to that effect became more absolute. We proposed an exploratory operation, but the relations were averse to this, stating that it was only after I had operated on the chest that the patient got so much worse. After a few explanations they consented. We used the same instrument, a diagnostic Dieselofoy, but with the ill-luck that seemed to pursue the case from the beginning, I just failed to hit off the abscess cavity, which was about 3½ inches from the surface—the needle being too short—could not reach it. They would not allow me to make another attempt, though the patient appeared to be a little better for a few days, but then began to suffer very severely, and could not get relief from pain in any position, either day or night. His proffered being

...the necessity of an exploratory operation, and they...
...the relief experienced each time, the patient's general
condition retrograded, nausea or actual vomiting was
rarely absent for a whole day together, colliquative
sweats continued, even in the absence of fever and rigors.
These latter however appeared again a week after the
second aspiration, and three days later on, a watery diarrhoea
set in, with from ten to twelve motions a day, and with
each accession of temperature he appeared to get worse.
He became delirious and noisy, and began to show other
signs of nervous prostration—*fascicatio* and *substitus
tendinum*, a dry and crusted tongue, scordes about the lips
and teeth, coma vigil, &c. Whilst these grave symptoms
were developing, a red oedematous swelling appeared
near the right infra-scapular region, dulness on percus-
sion extending to the level of the spine of the scapula, all
breath sounds, bronchophony and vocal fremitus had dis-
appeared, but anteriorly subcrepitan rales were audible to
the level of the 2nd rib, up to which there was absolute
dulness on percussion also. The breathing was now 56
per minute, and the pulse 135. A medium-sized trocar
and canula was inserted in the 5th interspace just below
the posterior axillary fold, and 27 ounces of sero-purulent
fluid were removed. This verifying again the diagnosis of a
coincident empysema. Although the dyspnoea became less
urgent, and the breathing was reduced to 48 per minute,
the patient grew worse and sank from exhaustion on the
7th September 1894, five months prior to date of post-
mortem.

Pathology.—We found practically the whole of the
lower half of the duodenum in a state of patchy con-
gestion, with five healed and two healing ulcers. The
largest was about the size of a shilling, and the smallest
half an inch in diameter. In one place three ulcers
had run into one another, and the former ulcers were
represented by a grayish depression with an uneven
base but well-defined borders. The whole of the pyloric
end of the stomach was thickened, soft, and congested,
and just above the upper semi-circumference was a rough
orange surface, with rough hard edges. The remainder
of the stomach canal was normal to the naked eye.
The peritoneum over the whole of the liver was much
thickened, as was also the folds of the lesser omentum,
which were covered with thick layers of puriform lymph.
The spleen was enlarged to about three times its normal size,
and its surface was much thickened and covered with
lymph. The peritoneal cavity contained 11 ounces of an
opaque, sticky, whitish fluid, thick with inflammatory
material. The lungs were considerably displaced upward
and to the right, and were hyperinflated and matted,
especially the left lung. The right lung was collapsed to

one-third its normal size, and covered with a thin
layer with a layer of puriform lymph, which in one part
of the lung was about 4 or 5 mm. thick, and in some
places it required considerable force to push the lymph
through it. Another patch posteriorly, about the middle
of the rounded surface, was also covered with a thin but
soft and ragged lymph which could not be peeled off.
The whole of the lung was congested, and the lower
lobe and greater part of the middle lobe had the appear-
ance of purulent infiltration.

The liver itself was considerably enlarged, and adherent
throughout its upper and posterior surfaces to the dia-
phragm, and could not be separated from the chest without
laceration. At one point, corresponding with a fissure in the per-
pendicular one inch behind the anterior surface, the
diaphragm was partially eaten into by the advancing sup-
puration. The right lobe was occupied by three abscesses,
the largest (the one aspirated) was 2 1/2 inches in diameter, and
separated, and was about the size of an 8 months' foetal head.
Another, anterior to, and below this, was about the size of a
lawn tennis ball, and the third, inside the smaller one,
about the size of an almond. The left lobe also contained
three abscesses in close juxtaposition to one another; the
largest was about the size of a large walnut. Surrounding
each of these abscesses, however, were a large number
of small white patches, which were in reality points of
suppuration about to coalesce with the larger ones. The
abscess walls and *tout ensemble* of the liver were quite
unlike the form of an abscess with which we are here
familiar—the ordinary tropical abscess. The pus micro-
scopically contained neither *staphylococci*, *streptococci*,
nor *amceb coli*. There were, however, crowds of ordinary
small micrococci, and a number of small bacilli with
rounded ends, which stained after Gram's method, and
presented a beaded appearance, never more than three
bright spots however, being seen in the body of any one
bacillus. It was smaller than the bacillus typhosus, and
gave one the idea of its being the bacillus *commensalis coli*.

This was an exceedingly interesting case from start
to finish, not only because of its rarity, but because the
clinical phenomena corresponded precisely with what
we should have expected.

AN INTERESTING CASE OF OBSTRUCTION OF THE BOWELS

(UNDER THE CARE OF BRIG. SURGEON, LIGHT COL.,
JAMES ARNOLD, M.D., I.M.S.)

Physician in charge of St. George's Hospital, Bombay.
(REPORTED BY ASST. SURGEON, A. V. M. KING.)

A PATIENT, named L. I., was sent into hospital from the
neighbourhood of Bombay by his medical adviser on
the 5th January 1895, suffering from symptoms said
to be due to obstruction of the bowels (dysenteria)
of probably eight days' duration. A letter from the
medical attendant described symptoms of constipation,
with severe abdominal pain, which were not relieved
by purgatives, or by opium, belladonna or other remedies.

History.—Patient says, that about 12 days ago, he
felt the first pain in the right side of the abdomen,
which he considered trivial, and took no notice of.

about 14 inches in length, and was passed in the morning. The patient was much excited and the pain above alluded to increased in severity. To relieve these symptoms he took half a bottle full of castor oil, but this only aggravated his condition. He states that he had been exposed to a chill, when was, after being wetted. A medical gentleman was called in consultation, and various remedies were resorted to, with the exception he passed small quantities of feculent matter in soft stools, which the doctor believed came from the lower bowel. Hiccough and vomiting having supervened, an operation was thought to be imperative; he was accordingly advised to go into hospital.

Condition on admission.—Patient much emaciated, with a care-worn expression, pinched features, cold and clammy extremities; tongue thickly furred, brown and dry, great thirst, constant hiccough and vomiting, temperature 101°F; pulse 120, weak and irregular; respiration 28, short, hurried and difficult.

On inspection, the abdomen was found to be much distended and tympanitic, especially toward the right side, where a tumour, tympanitic on percussion, somewhat larger than a man's fist, could be seen and felt in the neighbourhood of the ileo-caecal valve, and extending up along the line of the ascending colon; this was exceedingly painful on pressure. He lay with his legs flexed, and any movement seemed to cause him excruciating pain.

Diagnosis uncertain. Probably typhilitis or enteritis; possibly obstruction.

Prognosis grave.

Symptoms.—7th January 1895.—Pain is somewhat less severe; tumour less resisting; bowels moved freely, six times in the 24 hours; stools loose, yellowish grey, offensive; great thirst, constant retching, occasional hiccough; tongue still furred; takes nourishment very well; passed a very restless night; perspired profusely.

8th January.—Tumour softer, and patient can now bear a fair amount of pressure over the affected area. Tongue clean and moist; breath extremely foul; had 13 stools, 7 of which were passed during the night, preventing his having any rest; perspired profusely.

11th January.—Extremities more cold and clammy; abdomen is more distended and tympanitic, but the tumour has considerably decreased and is softer to the touch; pain felt only on deep pressure; passed 11 stools in the 24 hours, of the same character.

12th January.—Extremities continue to keep cold and clammy; no retching or hiccough since yesterday; had a number of stools, and during the night passed a very large piece of intestinal mucous membrane 36 inches in length and about 2 inches in diameter. The tumour has completely disappeared; there being only some induration felt in the arch of the right iliac region; night passed in agony.

13th January.—Pain, slight on deep pressure; had 4 stools in the 24 hours, one contained about 2 inches of a membranous clough; appetite is very fair; had a good night's rest.

14th January.—Passed 4 stools, loose, yellowish, and offensive. Two stools contained membranous cloughs,

about 14 inches in length, and were passed in the morning.

15th January.—Passed 4 stools, one containing a membranous clough about the size of a man's fist, and another containing a piece of intestine about the size of a man's fist, and another containing a piece of intestine about the size of a man's fist, and another containing a piece of intestine about the size of a man's fist.

16th January.—Passed 2 stools, one of a pale brown color; no cloughs; he is getting on, and is now allowed to sit up in bed.

21st January.—Passed 2 stools in the 24 hours, one solid, yellowish brown; tongue clean; appetite very good; is allowed to get about.

22nd January.—Is now perfectly convalescent.

25th January.—Discharged cured.

Treatment.—Pulv. ipecac 30 grains in the morning, 10 grains every evening; calomel, opium and quinine in pills for the first three days. Lette acid carbolio 1—40 compress over the right iliac region. Pulv. Opia at Greta preparata was also administered to check the diarrhoea.

Diet was chiefly warm milk with barley water as a drink, latterly chicken broth, arrowroot congee, milk, biscuits, blanc-mange and calves foot jelly.

Remarks by Brigade-Surgeon Lieut-Colonel James Arnott, M.D., Bombay.—The symptoms in this case on admission were severe, and with a history of constipation for eight days, in which treatment had failed, with vomiting hiccough, a rapid pulse, pyrexia, and a very haggard face; it seemed possible there was intestinal obstruction. The abdomen was distended, hard, and extremely painful, but there was so much increased swelling in the neighbourhood of the caecum, that it occurred to me that it must be a case originating in inflammation there, a sort of anomalous typhilitis or enteritis, that I decided not to adopt any operative procedure, but to treat for typhilitis. Accordingly, the above-described treatment was ordered and local counter-irritation by compress applied. Under this treatment a rapid improvement occurred, and in a few days the patient appeared out of danger. On 12th January (a week after admission) a membrane, 3 feet in length, was passed, and I append a description of it by Surgeon-Captain CHILDE, M.B. (Lond.), L.M.S., Professor of Pathology, Grant Medical College:—

"The specimen is a hollow tube, and has an elastic wall of the thickness of cartridge paper; when suspended from one end it stretches, so as to measure 36 inches, and can easily be made to measure more; but when placed flat upon a slab, so that it lies easily and naturally, without any tension upon its walls, it measures 34 inches; and I believe this is its true length. When lying in this position, its circumference is 2½ inches at one end, and 1½ at the other, and it gradually tapers from the broad to the narrow end. Its color is light-grey, and it has a general resemblance to wash leather, and there are a number of holes in its walls, apparently the result of tearing. Its outer surface is rough, finely granular and colored brown, so that it looks as if sprinkled all over with coffee grounds; whilst its inner surface is quite smooth, and of an ash-grey line, but in no part of it are any traces of valvular construction to be seen, nor has it the general appearance of a mucous membrane. Under the microscope a membrane of connective tissue shows much granular matter, a great deal of blood, and

There are many other varieties of white grapes, a few of which are mentioned above. These are the ones which are most common in California, and some of them are grown in other parts of the world. A number of the other varieties are more common in other parts of the world, and some of them are grown in California. A number of the other varieties are more common in other parts of the world, and some of them are grown in California.

The skin itself was somewhat tough and was "teased" out with difficulty. Its structure was a felt-work of fine twisting and curving fibres, crossing each other in all directions, and entangling in their meshes granular matter, and blood pigment and corpuscles; these fibres had a homogeneous, almost transparent appearance, and presented no definite structure, nor did they resemble any of the normal fibrous structures found in the body.

"This specimen is a membranous exudation cast from the intestine; judging from its calibre and the fact that it gradually tapers from one end, I think it has probably been shed from the upper part of the large intestine."

HYSTERICAL PARALYSIS.

By Asst. Surgn. Romanath De.

Madagascar.

On the 10th April last, I was called to see a respectable Hindu girl, aged about 15 years, at Kulpaddi—a village three miles down the river—who was laid up for about a week with an attack of paralysis of the left lower extremity, which the local *kabiraj's* and a whole host of charlatans had pronounced to be the premonitory symptom of a grave disease, viz., hemiplegia.

Taking into consideration the age of the girl who is a nullipara, and subject to dysmenorrhœa, and the peculiar nature of the disease, I was led to believe that this could not but be a case of hysterical paralysis. With this impression in my mind I started in a boat with no other medicine except a small electro-magnetic battery, and on reaching the destination, enquired whether the girl was ever subject to any hysterical fit, to which none could give a satisfactory answer, except the husband, who stated that she was seen occasionally falling into a state of stupor, lasting for a very short time only.

When I saw the patient, I found her lying on her back in a bed on the floor of the room, and on examination ascertained that there was partial sensation in the limb but complete loss of motion.

I then commenced applying the battery along the course of the sciatic, popliteal and tibial nerves, the muscles supplied by them responding to the stimuli, and had not continued five minutes when she had a fit—the typical hysterical fit, noticed by the family for the first time—which lasted for about a quarter of an hour.

Edinburgh Medical Record

10th June, 1898.

PROFESSOR RUTHERFORD ON THE STUDY OF PHYSIOLOGY.

There are many ways of doing things, but the great object should be to determine the speediest and best way of doing them. To have determined this with reference to the study of a Science or an Art is to have got over half the intellectual battle so hard. It is not every teacher, however, who is able to tell a student the easiest way of mastering a subject; for to be learned and to be able to teach are widely different things. Did our space permit, we would gladly therefore have reproduced in full the introductory lecture to the physiological course in the Edinburgh University delivered by Professor RUTHERFORD on the method of studying a natural science, such as Physiology. Dr. RUTHERFORD has been a science teacher for over thirty years, and has studied in several schools in different countries; so that exceptional value is to be attached to his experience and counsel. The first part of his lecture reminds us of an oft-asked question, *viz.*, whether private study or a public school training is preferential? And Professor RUTHERFORD helps in deciding this question when he says "the primary requirement of the student is the creation of an intellectual atmosphere in which his mind can work efficiently and with comparative ease. The mere attendance at a school or university goes far to create such an atmosphere. There is a monotony and a non-impressiveness in silent and private reading which soon makes itself felt. Dr. RUTHERFORD's opinion may be summarised to be that attendance at lecture is vastly more beneficial than reading a subject privately, for the mental atmosphere created by the latter method is comparatively dull and likely to become repulsive; for, however clearly put and well arranged may be the subject read, the mind cannot be stimulated to the extent it would be by words spoken. Moreover, the lecturer who understands the subject, gives suitable emphases and modulations to each passage, imparting to it its fullest life. Companionship in schools and colleges moreover lightens labor, the interchange of ideas expands the mind, doubts are cleared and difficulties mutually explained and removed; and, above all, a healthy spirit of emulation is engendered.

It is necessary, according to Dr. RUTHERFORD, that lectures in physiology should be experimentally illustrated. These experiments are, for the most part, of a physico-chemical nature. Many of them are made on living tissues, and a small number on living animals, without the production of pain. It is best to hear a lecture on a subject and then to read the subject, it is then better grasped and assimilated. As to note-taking, a knowledge of short-hand is very helpful, and should be acquired and notes should be taken in that system. To those unacquainted with short-hand, writing a syllabus is advised. Under any circumstances it is advisable to take notes, as this practice helps much in fixing attention

to the subject. There is no such thing as a free lunch, and then, if one wishes to, he must work. A subject should be learnt by doing, and not by rote, otherwise the mental impressions are feeble and evanescent, and the subject consequently easily forgotten. The aim of education is not to pass an examination or to cram one's mind with numerous facts and imperfectly digested theories, but to train one in scientific modes of thought. Hence instruction by systematic courses of lectures is superior to the tutorial method, which tends to degenerate into "grinding." A natural science must be studied from nature—by the use of one's own senses. The mind is wearied in simply endeavouring to absorb abstract statements made in books and lectures, while it is a mental pleasure to realise phenomena by direct inspection and investigation, which moreover imprint facts vividly on the mind and tend to make one an accurate and independent observer. With regard to the power of observation, this differs in different men according to the acuteness of their mental vision. Some can concentrate their attention on an object until they have thoroughly scrutinised it, while others have no firm grasp, and have very vague impressions of what they see; but to be a skilful or a successful physician one must be intimately acquainted with nature. It is however absurd to expect anything like a close study of nature in respect to the different subjects of medical science in a five years' course of study. Professor RUTHERFORD therefore thinks that in professional examinations minute details should be avoided, as this makes candidates cram their minds for the time being with a lot of easily forgotten minutiae and gives them no time for thought and assimilation of subjects. A student should know the important facts and theories of each Science, but his knowledge of these must be sufficient and accurate and well-reasoned. There is no doubt but that the nature of our professional examinations is in a great measure responsible for the "brutening" that goes on. If the examining bodies shew from the questions set that what they expect or demand of a candidate is a good, sound knowledge of important facts, there will be an end to students storing their minds with scarcely understood details and weakly impressed facts which vanish from their minds immediately an examination is over. As Professor RUTHERFORD puts it: "no mind, young or old, should strive to become an encyclopaedia of knowledge. Life is too short for such effort, and, specially, it can never be accomplished in five short years." Professor RUTHERFORD therefore counsel moderation in examination requirements; and subjoined to severe mental discipline in mastering the chief facts of medical science and in training the mind to the habit of thought. The study of physiology is of special value in training the mind to the method and qualities of thought required by the physician; and in physiological study not only must one understand its established laws, but he must also be capable of making scientific use of the imagination, which will lead him from what is proved to what is probable, and which strives to penetrate the unknown by deductive speculation and by testing its speculation by experimental truths. Such scientific use of the imagination is the basis of invention and discovery. One must believe, however, live in the hope of establishing or some important discovery.

To make a discovery, the first essential is the formation of an idea; each idea is a likely result of thoughtful and reflective study; and the most powerful incentive to thoughtful study is critical discussion of theories. It is advisable therefore for a student to get a congenial friend to fully discuss with him the problems that arise in the course of study, and that he join a society for the discussion of medical topics.

We have but epitomised Dr. RUTHERFORD's words of wisdom in the matter of how Physiology and the natural sciences are to be studied to the best advantage, and we hope that even in the condensed form in which we have put them, our student readers will benefit by a careful consideration and digestion of them, and that teachers and examiners will help and endeavour to secure in students and candidates a sufficient, accurate, and well-reasoned knowledge of subjects instead of the evanescent encyclopaedic lore which students endeavour and are harmfully encouraged to strive to attain.

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THE CONTROVERSY ON THE TREATMENT OF SNAKE-BITE BY STRYCHNINE.

OUR readers will recall to mind the excellent series of experiments on the antidotal effects of strychnine on cobra venom, which were published in this journal by their author, Surgeon-Captain ELLIOTT, M.B., of Madras. Our readers will also recall to mind our comments on Dr. ELLIOTT's work in this connection. We expressed our entire approval of Dr. ELLIOTT's experiments and shewed, how to our mind they very conclusively proved the truth, that strychnine was not an antidote to cobra venom. Later on we published *verbatim and in extenso* Dr. MUELLER's article in which he attempts a refutation of Dr. ELLIOTT's experiments and conclusions. We made no excuse for inserting Dr. MUELLER's article as presented to us, though at the time of its publication we expressed our opinion on it to Dr. ELLIOTT. We have waited patiently for a public expression of opinion on it by the medical press, both in the Colonies and America and in England, but we have looked in vain for the smallest notice of Dr. MUELLER's comments, while we have found, as we anticipated, that Dr. ELLIOTT's experiments have been greeted with very cordial attention by the scientific world.

The time has come however when our comments on Dr. MUELLER's article should no longer be withheld, not only in justice to our readers and to the cause of scientific investigation, but also in justice to Dr. ELLIOTT.

We would first of all point out that Dr. MUELLER's remarks have failed to elicit concern, for the simple reason that he employs the weapon of abuse, which in scientific debate can never be mistaken for argument. We regret this, as Dr. MUELLER's efforts to advance the therapeutics of snake poisoning have been praiseworthy in the extreme.

We would now draw attention to certain points in Dr. MUELLER's paper:—

(1) Dr. MUELLER accuses Dr. ELLIOTT of wilfully suppressing evidence on two heads:

(a) As to the fiasco of the TULL-WALSH incident.

(b) As to the fiasco of the TULL-WALSH incident of July 1892.

(a). We are all aware of the fiasco of the TULL-WALSH incident, which occurred in our hospital in 1892, July 20th, in which Dr. TULL-WALSH points out that he named the snakes for BAKER, who then sent them on to the British Museum.

(b). We can find no such case as MUELLER alludes to in the July or other numbers of the *Record* for 1892.

As to the other cases, which Dr. MUELLER accuses ELLIOTT of suppressing, we can only say ELLIOTT has published every available case, and it is unusual (to say the least of it) to have accused ELLIOTT of a deliberate breach of honor on such slender grounds.

Dr. MUELLER speaks of ELLIOTT's diagnostic successes in analysing records, and quotes case 39 in tables in support of this statement. The symptoms, as published by BAKER in the *Medical Reporter* of 18th June 1894, were:—

Excessive thirst, dryness of mouth and tongue, subnormal temperature, tremulousness, severe frontal headache, injected conjunctiva, dilated pupils, talkativeness and incoherence, inability to stand up and inco-ordination followed later by profound sleep and stertorous breathing.

These symptoms MUELLER ascribes to snake-poisonings. We need not point out that Indian surgeons will not agree with this opinion, and will ascribe the case as ELLIOTT did to drink.

As to the recurrent symptoms MUELLER speaks of, they are not known to us in this country, and are absolutely different from the septicemic after-effects of viper bite, which our ophiologists have so clearly described.

MUELLER speaks of the effects of strychnine on a snake-bitten man as 'mere fleabites,' 'sources of amusement,' etc.

No one who has read the case carefully recorded by Surgeon Major CADGE and Surgeon Captain PRATT in the *Indian Medical Gazette* of October 1892 could for a moment accept such inconsequent statements. These reliable observers own to having nearly lost their patients by strychnisation, and they record their sufferings graphically, though briefly.

(4) MUELLER has not ventured to answer argument by argument. He has shelved the question of the analogy between man and animals, and has thrown in some remarks bearing on a physiology which we cannot at all understand, and which we don't think any soundly-educated physiologist could hope to understand.

We sincerely trust Dr. MUELLER will take these comments in good part. They are made absolutely without any feeling of partisanship and simply in vindication of the cause of scientific research.

WILL-POWER AND DISEASE.

THERE is a great deal to be said in favor of what is best described as the "mental-science" cure for many of the minor ills of life. It is possible to throw off weakness, inactivity, and languor, and infuse new life and spirit into one's own failing system by mere effort of will. True, it is hard at first, but with every trial it comes easier, until one may almost feel that the mind has gained a supremacy over the body. It is certain that the mind can, to a great extent, control the body, and drive away much that saps vitality and undermines the strength. To keep ever before the mind the idea that will-power is one of the strongest forces in nature and steadfastly to refuse to yield to weakness, is to have gained something that one possesses, so one will ever be willing to lose.

COMMENTS AND NEWS.

ARMY MEDICAL STAFF AND INDIAN MEDICAL SERVICE ENTRANCE EXAMINATION.

THE *Lancet* says:—It is announced that in future candidates for the Army Medical Staff and Indian Medical Service will be required to make one-half of the total obtainable marks of the examination to qualify for admission into the Army Medical School, Netley, as well as one-third of the marks in the compulsory subjects of the examination. We understand that this new rule has been introduced in consequence of a falling off in the quality of the candidates competing, and that on representations which have been made to them the Secretaries of State for War and for India have been pleased to introduce it. This regulation has, doubtless, been decided upon in the hope of obtaining better professional men for the services, but we cannot help feeling that it will not have the desired effect, and that the responsible authorities would have done better had they sought to attract better men to the services by rectifying some of the terms of service which now press heavily on the medical officer, foremost among which are the, in some ways, unsatisfactory conditions under which the officers of the medical staff are serving, both at home and in India. We refer especially to the question of the unsatisfactory rates of pay which the junior ranks of both services are now drawing while serving in our Eastern Empire. We understand that the total obtainable marks at the London examinations are 4,800. Four thousand of these are awarded for the compulsory and 800 for the voluntary subjects of the examination. Referring to our past issues we find that since the appointment of the new Board of Examiners in 1898 five examinations have been held. At these examinations 60 men have qualified for admission as surgeons-on-probation for the Army Medical Staff, and 78 as surgeons-on-probation for the Indian Medical Service. Had these candidates been examined under the regulation now announced only 70 per cent. of the candidates for the Army Medical Staff would have qualified and 58 per cent. of the candidates for the Indian service. We notice that since the appointment of the new Board of Examiners the marking has been on a lower scale than it was in old days, and we feel that this new rule may have far-reaching effects unless it be modified. Either the number of candidates who are considered to have qualified at the next examination will be a very limited one, or the examiners will be obliged to be more liberal in the view they take of the candidates' answers, which will, of course, stultify the hoped-for result. The quality of the candidates competing is, of course, regulated by the advantages and the inducements which the services offer, and cannot in our estimation be altered by any rule passed by the authorities to raise the average number of marks to be gained by the candidates at the examinations."

INDIAN HOSPITAL ASSISTANTS.

THE *British Medical Journal* says:—"The 'Native Doctor' from whom the 'Hospital Assistant' of the present day is an accidental evolution, was at first little better than a compounder and dresser, who by observation, instruction and practice acquired some knowledge of diseases and its treatment, and was entrusted under close supervision with the care of the sick. Nowadays the hospital assistant has to undergo a three years' course of instruction in a medical school, to pass a tolerably severe examination, to obtain a diploma, and to prove himself qualified for medical, surgical, sanitary, and medico-legal work in positions where he is subject to very slight and distant control. Yet, notwithstanding the more scientific and complete education and training

which he receives, and the higher responsibilities to which he is entrusted, his status, pay, privileges, and prospects remain pretty much what they were when his predecessor, the native doctor, was little better than an apothecary. He receives the pay of a common clerk or, perhaps, an assistant compared with subordinates in other departments, for example, Railway, Telegraph, and Public Works Departments, his position and prospects are markedly inferior. We have received a copy of a memorial to Government drawn up by hospital assistants serving in the Bombay Presidency, in which, on considerations such as we have indicated, petition is made for more liberal pay and allowances, improved rank, title and status, increased pension, and better encouragement in the shape of promotion, honorary distinction, etc., for long and good service. The prayer of this most useful and deserving class of medical subordinates has our hearty sympathy and support, and we entertain a strong opinion that the time has come for raising the condition of life and service of a section of the public medical establishment of India which has advanced in intelligence and efficiency far above the original level, and which is likely in the future, if properly encouraged, to fulfil more numerous and important offices in the army and in civil life than at present.

THE FAILURES OF PASTEURISM.

DR. M. B. COLAH wrote a very strong brochure in defence of Pasteurism, which he read at a special meeting in Bombay last October. MR. BENJAMIN BRYAN now takes up the cudgels and reciprocates in a trenchant, terse reply, attempting to refute and put to rout DR. COLAH's facts and figures. He disputes LORD SALISBURY's dictum quoted, "that the cures for *anthrax* and *hydrophobia* are established facts." As to *anthrax*, Professor PASTEUR's treatment tested in England by KLEIN was pronounced by him to be "perfectly ineffective!" When tested in Germany by KOCH, it was found to possess very little preserving power and was a source of danger to non-inoculated men and animals. Moreover, much of DR. COLAH's information is stale and old. PASTEUR's test experiment mentioned, was performed in 1881. The more recent data are taken from FRANKLAND's work (just issued). With regard to *hydrophobia*, we are not told how many failures to inoculate from (so-called) *bona fide* rabid matter (spinal marrow) took place. That some failures did occur seems highly probable, if we may judge from analogy! Professor SHERRINGTON of London experimented on animals by inoculating them with rabid matter (spinal marrow.) The results were *absolutely negative*. No symptoms of rabies developed, although the material was *bona fide* rabid, and the inoculation carefully carried out.

DR. ZIMMERS stated last year that of all the dogs alleged to be mad only 5 per cent. were really so. A pamphlet entitled "M. PASTEUR'S Double Heatonomb" has been issued, which gives in tabular order a statement of 372 of PASTEUR's failures.

"M. PASTEUR'S DOUBLE HEATONOMB."

THIS is a tabulated statement of 372 cases of rabies inoculated by PASTEUR on various occasions between the years 1885 and 1895, all of whom recovered, in spite of the inoculation. It came out as a supplement to the *Epoch*. It begins with an extract from the report of the *Lords' Committee on Rabies in Dogs*, issued in 1887, in which DR. LAURENCE BURNTON, who was on the PASTEUR Commission which met in that year, and before whom was a similar engagement giving details of PASTEUR's nomenclature, admits the accuracy of the statements contained therein. The 372 cases are considered thus:—

- (1) Name and age of patient; (2) locality where bitten;
- (3) by what dog and when (date); (4) date of first inoculation; (5) date of death from hydrophobia; and (6)

of cholera, dysentery, and typh. Of these there were 226 cases, of which 100 died. Of these there were 100 cases of cholera, 100 of dysentery, and 100 of typh. The first case was carried out in Paris (180), Brazil (181), Italy (182), and Rio de Janeiro (183).

Dr. COLEMAN adverts to PASTEUR's claims regarding the cholera and the disease in France; but in spite of them, the physicians still devastate large tracts of vineyards, and the effluvia continue still to surface, notwithstanding PASTEUR's alleged discovery. Dr. COLEMAN also refers to SIR JOSEPH LISTER's carbolic spray, being based on PASTEUR's discovery; but SIR JOSEPH has abandoned his theory regarding this spray. Mr. BRYAN goes on to say that bacteriologists have produced but few results of any permanent value. The demonstration of the germs of cholera and diphtheria have not helped in the least to bring about an efficient cure for either disease! The microbe of rabies which PASTEUR claimed to have isolated has never yet been identified. In fact according to Mr. BRYAN's opinion the whole superstructure of bacteriology rests on a very sandy foundation.

HOW BIG AND SMALL DOCTORS ADVERTISE.

MR. LABOUCHERE in *Truth* says:—"With reference to my last remarks on doctors' advertisements, a correspondent sends me a report of a lecture delivered at Glasgow University by 'DR. BARR, the newly-appointed lecturer on diseases of the ear.' It certainly comes very *apropos*. The newly-appointed lecturer hastened to inform Glasgow that he had reason to believe 'that one person in every three has a defect of hearing in at least one ear,' so that 'there should be over 200,000 persons in Glasgow, each of whom had an aural defect.' The public, he intimated, have too little sense of the alarming condition of their ears, and the ability of the medical profession to put them to rights, but when (as the result of the institution of lectures on ear diseases at the University) Glasgow awoke to the true state of the case, 'what a boom might be expected in patients from Glasgow alone!' This is putting it pretty straight, is it not? Were this worthy professor to see a brother practitioner beating a drum outside a booth at a fair, and inviting the yokels to walk up, walk up, and be cured of all sorts of diseases, the existence of which they had never before suspected, he would no doubt form a very unfavorable opinion of such proceedings. Between the two modes, however, of stimulating a 'boom' I confess I do not see much difference."

A BREACH OF PROFESSIONAL CONFIDENCE.

A LONDON contemporary says:—"A curious trial involving points of great importance to medical men, midwives, and the public took place this week at the London Central Criminal Court. A doctor was called in to see a patient and found her seriously ill. He suspected that illegal means had been adopted to procure a miscarriage, and apparently neither the patient nor her attendant, who is described as a midwife, denied this to him. He then took the unusual step of informing the police of his suspicions, and he appears also to have assisted them in obtaining further information. The result was that the midwife, a friend of his patient, and finally, the patient herself, were arrested and tried on a criminal charge. At the trial it was pleaded that whatever the midwife did, was done with the object of ascertaining the patient's exact condition, and it was proved that the patient's husband was aware of her proceedings, and that the instruction made by the physician that there was an ulterior motive for the interview asked in the case by the third prisoner, was entirely unsupported by facts. Indeed, it would appear that at this time, at any rate, a very grave injustice may have been done. The jury found the physician 'Not Guilty.' Both the medical profession and the public will keenly question

the right of any medical man to act in this manner, and as a result of this publicity there will have been given to him in professional confidence, and which may affect most deeply the honor of his patients and the usefulness and happiness of many other people."

COMPLIMENTARY TO DR. COATES.

SAYS the *Indian Daily News*:—"The importance of having a family doctor has, in England, generally been considered as equivalent to the necessity of being provided with a family lawyer, perhaps because of the old adage: 'Tell all your secrets to your lawyer and your doctor.' Evidently, it is advisable to curtail one's lists of confidants to the minimum. In India, however, we have learned to bow to the orders of a paternal Government, and accept as our medical attendant whoever may happen to be placed in the recognized position at the time, owing to his or the patient's transfer in the interests of the public service, or consequent on a change of residence. It is new, therefore, to find one of our Aryan brothers ignoring the whole army of skilled physicians residing in the country, and telegraphing home for a doctor he already knows and appreciates. I hear that a member of the Tikari Raj, near Patna, has sent for DR. COATES, formerly Principal of the Medical College here, as well-known in the mofussil and in the native states as he was in Calcutta. We cannot but admire, not only the grateful appreciation of past services expressed by the action of this Raj, but also the ready response to such a call shown in DR. COATES' brief telegraphic reply, 'Coming.' Our old friend is on his way out, and may be expected shortly."

HEALTH OFFICERS AND FAMILY PHYSICIANS.

THE following extract from the *New York Medical Journal* will be read with interest in connection with the remarks we recently made upon the unprofessional and illegal action of the Calcutta Health Officer in his manner of dealing with small-pox patients, who were under the treatment of their family physicians. We trust that the justice of our remarks will be fully seen in the exemplary punishment which the New York Board of Health is prepared to mete to similar delinquents within its jurisdiction. The *New York Medical Journal* says:—

"It is announced that the New York City Board of Health has passed resolutions to the effect that any inspector or medical officer acting under the board who, when brought officially into contact with a case of infectious disease, interferes directly or indirectly with the attending physician's treatment, or who undertakes medical attendance in a family where acquaintance has been made in the line of his official duties, shall be dismissed from the service, unless he has been specifically instructed to perform the acts in question by the Board or by a chief of division; also that the sanitary superintendent shall instruct all the medical sanitary inspectors as to their specific duties in respect to persons sick with infectious disease."

"The statement is supposed to be a statement apparently of the sanitary superintendent's action, viz., that the passage of the resolutions was not the outcome of any special charges or complaints against any of the inspectors. This we can readily believe, for the inspectors have, we are persuaded, generally been very discreet under conditions that must sometimes have put their conscientiousness to a severe test. We have no doubt that, as a body, they are hard-working and prudent men, always ready to concede the family physician's predominance in every matter that does not involve a direct infraction of the sanitary ordinances. Still, it is exceptional instances of the contrary may have been the case. It would not be strange if it had been, for the amplified part played by the Board in the actual diagnosis and treatment of individual cases of disease in these days of bacteriology and serum

therapy and have greatly multiplied the occasions on which friction might be almost inevitable. We therefore look upon the Board's action in this matter as highly commendable."

A FEW FACTS ABOUT INTemperANCE.

THE mortality in intemperates at 21 to 30 years of age is five times that in the temperate, and from 30 to 40 it is four times as great.

| A Temperate person's chance of living is : | | | An Intemperate person's chance of living is : | | |
|--------------------------------------------|----|-------------|-----------------------------------------------|----|-------------|
| at | 20 | 44.2 years. | at | 20 | 15.6 years. |
| " | 30 | 36.6 " | " | 30 | 13.8 " |
| " | 40 | 28.8 " | " | 40 | 11.6 " |
| " | 50 | 21.25 " | " | 50 | 10.8 " |
| " | 60 | 14.28 " | " | 60 | 8.9 " |

Persons intemperate on spirits have a greater mortality (80 per 1,000) than those intemperate on beer (48 per 1,000); while those intemperate on spirits and beer have a slightly greater mortality (62 per 1,000) than those on only spirits or beer.—*Public Hygiene.*

Table showing mortality of Liquor Dealers and Men generally.

| Disease. | Men 25 to 65 years of age. | |
|--------------------------------|----------------------------|----------|
| | Liquor Trade. | All men. |
| Alcoholism ... | 55 | 20 |
| Liver disease ... | 240 | 39 |
| Gout ... | 13 | 3 |
| Diseases of nervous system ... | 200 | 119 |
| Swindle ... | 26 | 14 |
| Diseases of urinary system ... | 83 | 41 |
| Do. of circulatory system ... | 140 | 120 |
| Other causes ... | 784 | 650 |
| All causes ... | 1,521 | 1,000 |
| Mortality of clergymen ... | ... | 100 |
| Innkeepers ... | ... | 274 |
| Liquor traders ... | ... | 245 |
| Brewers ... | ... | 397 |
| Inn and hotel servants ... | ... | ... |

INOCULATION FABLES.

DR. HAFKINE'S tour through the tea districts to introduce his system of inoculation against cholera afforded some amusing illustrations of the credulity of the coolie mind. On a certain garden it had been arranged that the entire labor force should be inoculated the next morning. When the time arrived, however, not a single coolie was to be found in the lines, excepting an old woman who could not walk. It was then discovered that a report had circulated amongst the coolies that the doctor cut the patient open on either side of the stomach, and then passing a large towel right through, wiped out the whole of the intestines. It was not until the Manager "Sahib" had been inoculated before them that any of the coolies would consent to be performed upon.

A WORD IN FAVOR OF HAFKINE.

A tea planter in Assam, writing to the *Indo-European Correspondent*, says:—"The professor inoculated 1,154 coolies here once, and 785 of these coolies a second time. (Two inoculations are best, he says). We have had 33 cases of cholera here, 13 of them fatal, but in only one case has an inoculated person died, and that person was only once inoculated. There was a case this morning and the person attacked by cholera was the only person in a household of five who has taken cholera.

"This immunity, or almost so, from fatal results seems to have made a great impression on the coolies, and although at first they were rather reluctant to try it, as it involved two days' fever and loss of work, later on they flocked in in crowds,

and many hill-tribe people. We have not a few other coolies inoculated; so that there is an opportunity of comparing which is best when attacked. The professor does not, I think, state that it gives absolute immunity. Vaccination against small-pox does not do so either, but they usually rob them of their virulence and fatal results. We are keeping careful statistics here; and will be able to judge better next year."

INTRA-UTERINE INJECTIONS BY THE ANCIENTS.

DR. KOROMILAS, a Greek physician, thinks it is evident from their writings that HIPPOCRATES, ORIBASIOS, PAULUS AEGINETA and GALEN knew of the use of intra-uterine injections. HIPPOCRATES divided the female genital organs into three parts: 1, the external organs; 2, the genital canal or vagina; 3, the uterus; and had a separate remedy to inject into each—wine and honey for the external parts, "goose grease" for the vagina, and wine and oil for the uterus. DR. KOROMILAS believes that HIPPOCRATES was the first to make intra-uterine injections.

INSOMNIA.

It is pointed out by MR. HUXLEY that nature's plan for curing insomnia is to limit the supply of oxygen to the blood, as the cat and dog bury their noses in some soft hollow in their hair or fur; birds put their heads under their wings and soon fall asleep. MR. HUXLEY suggests that those suffering from insomnia should cover their heads with the bedclothes and breathe and re-breathe only the respired air; when drowsiness is produced it is easy to go on sleeping, and the bed covering can be pushed aside and as much fresh air obtained as is needed.

SHORT ITEMS.

Surgeon-Major Clarence Smith, Madras has been offered a chance of escape from the disastrous consequences of "the phantom kiss," in as much as the Secretary of State for India has now given him the option of a trial by Court Martial. Should Dr. Smith be cleared by this tribunal, he will be re-instated into the Indian Medical Service.

Although it would not be illegal or constitute infamous conduct to advertise notice of removal, it would contravene the ethics of the profession. The most unexceptionable mode, to notify change of residence, is to transmit an autograph note to *bona-fide* patients or to enclose an ordinary address card with "Change of Address" inserted at the top, the old address, in the lower right corner, being defaced by a black line, and the new one engraved in the left-hand corner.

The driest place on earth is in Egypt, along the Nile, and especially between the two lower falls. The inhabitants have never seen rain, as it has never been known to fall there.

When told that water falls from the skies in other parts, they first smile and then look sorry to think that white men will tell such deliberate falsehoods and expect the Egyptians to believe them.

The *New York Medical Journal*, in commenting upon the way in which private practitioners are handicapped in India by officials, says:—"We assure our Indian brethren of our sincere sympathy and of our hope that their just aspirations may meet with full fruition. Let them not be discouraged."

Dress materials vary greatly in their capacity for retaining odors; silk allows almost all odors to pass through without leaving any smell behind; linen holds them fast; wool, though it lets many smells pass through, retains the odors of decay, like that of a corpse.

Surgical interference is not advised, except when grave symptoms intervene,

...the
... ..
... ..

The treatment of diphtheria is not with in order of frequency of the throat, larynx, nose, trachea, bronchi, mouth, tonsils, etc., middle ear, conjunctiva, prepuce, glass penis, nose, oesophagus, stomach, and intestine.—*Dr. H. ...*

The Chief Presidency Magistrate of Bombay imposed the exemplary fine of Rs. 150 on a Mahomedan doctor for issuing an obscene illustrated circular relating to diseases he pretences to cure. On enquiry we find this fraud is only a commonplace of medicine.

The tongue-shaped projection, to which attention has been called by Riedel, is present in many cases of hydrops of the gall-bladder; it is not infrequently confounded with a floating kidney on the right side.—*Kear.*

William Scott, from India, has passed the second examination of the Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow.

Surgeon-Captain Trask, A.M.S., the well-known cricketer, who went home by yesterday's mail on leave, has been offered an appointment in the Egyptian Army, which he is likely to accept.

Twenty candidates will be entertained for the Junior Department of the Medical College, in connection with the Civil Department, of the Medical Subordinate Establishment of Madras.

The small-pox epidemic in Calcutta has now almost disappeared. The admissions into the Campbell Hospital have been few and mild, occurring in the distant parts of the native town.

It is understood that the Secretary of State has ordered the reinstatement of Surgeon-Major Clarence Smith in the service, but the news requires confirmation.

The storm views which you see in small glass globes are made by mixing solutions of alum and lead acetate (not too strong) and adding a little glycerine.—*Chemist and Druggist.*

An examination for not less than twelve appointments to Her Majesty's Indian Medical Service will be held in London during the month of August next.

Prof. Wilson says that the tendency in children, during an attack of enteric fever, is to constipation and not to diarrhoea.

Two lines which should find a place in the *code morini* of every physician are: "The pain of spine disease is in the stomach," and "the pain of hip disease is in the knee."

Surgeon-Major Ross of Madras has won the Parkes Memorial Prize for his essay on "Malarial Fevers; their causation and prevention."

Surgeon-Capt. G. Webb, A.M.S., died at St. George's Hospital from

The doctor who knows nothing outside of medicine does not even know that.—*St. J. Med. Press.*

Physiological ... is the first principle in the cure of all

... ..
... ..
... ..

... ..
... ..
... ..

Nervous and excitable people are, as a rule, not good subjects for chloroform or any other anæsthetic.

An abdominal support is a good adjunct in the treatment of constipation in patients having large abdomens.

Dr. Dana declares that five drops every three hours of arbor vitæ relieves the most severe case of cystitis.

Eczema marginatum is not an eczema, but a parasitic disease.—*Dr. J. C. McGuire.*

The *British Medical Journal* announces that the first milkwife was a man, since it was Adam who conducted Eve.

OUR LONDON LETTER.

(From our own Correspondent.)

THE weather here is variable, but is settling down with the promise of a brilliant spring.

Among the empty and fertile discussions raised in medical circles is the following:—Should every medical practitioner be termed Dr. or should this title be reserved for holders of the M. D. degree alone? "Certainly important interests may or may not hang upon the upshot of this time-worn and much-debated question, but up to date we find too much space and time have been devoted to it." We feel all but convinced that it should rest upon the unanimous decision of the university authorities throughout Great Britain, whose business it should be to look after the status of their alumni.

Among surgical items, the journals during February and March have teemed with case reports and letters advising castration as a means of radical cure for hypertrophied prostate; the results obtained by this operative measure would seem to be encouraging.

DR. B. T. HEWLETT has given us a short but interesting account of how tetanus antitoxin may be prepared, and quoting ROUX, VAILLARD and others on the subject of immunisation.

DR. HADDEN has just been sued on the plea that he had wrongly diagnosed a patient's complaint as small-pox, and thus notifying the same to the authorities, the jury awarded £100 damages.

Several cases of polydermia laryngis were shown at a meeting of the Laryngological Society. In one case that of a woman, it came on 20 years after a confinement. Alcohol and beer were mentioned as likely causal factors of the disease. This case was treated by painting with perchloride of iron for three weeks. She regained the use of her voice.

At the Harveian Society Dr. TAYLOR read a paper on syphilitic diseases of the brain, classifying them as follows: (a) meningitis; (b) gummatous of meninges, with secondary affection of the brain; (c) diseases of blood-vessels, arteritis and periarteritis. DR. GUTLINE is responding, mentioning temporary spasm and ophthalmoplegia as minor symptoms of such lesions.

A note of importance to Indian practitioners comes to us from a pamphlet of PANTALONI, wherein he reports four cases of liver abscess successfully treated by operation. And what is most pertinent is the fact that the patients were residing at Marseilles, and curiously enough had never been out of France, and he adds a crucial remark, viz., that three of these cases had a definite and clear history of dysentery.

MR. HULKE, late President, R. C. S., was interred at Deal. The following medical bodies were fully represented at the ceremony, of the Royal Colleges, Royal College of Surgeons, the laboratories, R. C. P. and R. C. S., the Middlesex Hospital and Medical School and the Clinical and Geological Societies.

The result of the Royal Opium Commission to India is that legislation shall remain practically *in statu quo*. SIR WM. ROBERTS adds to the report a note on the medical aspects of the question, and MR. HARIDAN VEJARIDAS records that the increasing consumption of alcohol in India is a subject of far greater importance than that of opium.

Asent the Medical Register for 1895, there has been a decrease in Ireland since last year, both in students and practitioners enrolled, whereas in Scotland and England the numbers have increased.

DR. W. B. THORNE gives us some account of how cardiac affections may be treated by baths and exercises, but we believe the credit of this form of therapeutics is due to Germany in the person of DR. SCHOTT.

We have seen too, a number of cases in which influenza has been complicated by acute rhinitis, post-nasal catarrh, pharyngitis and tracheitis.

Diphtheria, which had been declining here, has again increased in the number of persons attacked during the week, as estimated by the increase of admitted cases to the various metropolitan hospitals. The etiology and pathology of this disease still continue to be warmly debated at some of the leading medical societies' meetings.

A disease well known to practitioners in the Far East called "Otomycosis," supposed to be caused by bathing in filthy wayside pools, is excessively common among Malays and Chinese coolies; the latest treatment being to wash out the meatus with a solution of one part of hydrargiri perchloridi in 1,000 parts of rectified spirit, followed up by the application of dry boric acid.

We regret to have to record the death of SIR W. SCORRELL SAVORY, Bart., F.R.C., Surgeon Extraordinary to the Queen, Consulting Surgeon to St. Bart's, and Surgeon to Christ's Hospital. The cause of death was influenza with intense pulmonary congestion and cardiac failure. He was a commanding figure, both as a surgeon and a gentleman; he was a fluent and facile orator, was born in 1826, nominated Assistant Surgeon in 1861, and full Surgeon in 1867, retaining his post till November 1891, when he was placed on the consulting staff. He had been H. S. to the renowned Sir W. LAWRENCE, and was elected a Fellow of the R. C. S. He became President of the R. C. S. England in 1865. He will be much missed in medical circles. Another eminent professional author, namely, DR. HACK TUCK, M.D., LL.D., F.R.C.P., passed away on

March 5th last. In 1856 he was associated with DR. BUCKNILL as co-author of *Handbook of Psychological Medicine*. He was 18 years ago co-editor of the *Journal of Mental Science* with DR. CARR, DR. FRYER was President of the Medical-Psychological Association of Great Britain. It was not until 1882 that his great work, "a voluminous Dictionary of Psychological Medicine" was published. He died in Welbeck Street, where he took up his abode as a consultant in 1857.

Surgeon-General THOMAS RYAN, M.D., died at San Remo at the end of February of this year. He became Assistant Surgeon in 1857. He served with the 8th Hussars during the Indian Mutiny (1857-1858), was present at the capture of Kotah, and the actions of Kotana and Koonbana (medal with clasp), and in the Afghan War 1878-80 (medal).

DR. GRUBE (of Neuenehr) reports four cases of psoriasis associated with diabetes, and does not believe this to be a mere coincidence.

Cases of melancholia have actually been cured by the induction of thyroïdism by the use of thyroid gland extract.

A fund is being raised to erect a suitable memorial to the late Oxford Regius Professor of Medicine, Sir HENRY ACLAND and among the subscribers are the Prince and Princess of Wales, Princess Christian, Duchess of Albany, LORD ROSEBERRY, MESSRS. GLADSTONE and RUSKIN.

Among late occurrences there has been an outbreak of rubola on the training ship *Britannia*.

The difficult question has been propounded—Is a doctor, when called in to attend a woman whom he considers has had an illegal operation performed for the induction of premature labor, to act as an amateur detective? We fancy not, but in the event of death he should certainly lay all the facts observed, before the police.

DR. C. F. ARMAND SEMPLE, M.D., F.R.C.P. London, the well-known teacher and author of "Aids to Materia Medica, &c.," has passed away at the age of 50.

Reports of tetanus cured by antitoxin are getting more numerous. The treatment of snake-bite has been criticized by one of our contemporaries. *Strychnine* has not had a scientific trial, nor has any other efficient means of saving the ophidian punctured patient as yet. Soluble hypodermic of strychnine sulphate gr. $\frac{1}{10}$, repeatedly injected are the most efficacious and convenient remedy we at present possess.

DR. DUJARDIN BEAUMETZ, an eminent French therapist and Editor of the *Bulletin de Therapeutique*, is dead. He was elected a member of the Academy of Medicine in 1880.

AN ASCARIS IN A PELVIC ABSCESS.

KOON states that during the removal of a pyosalphix a small abscess was discovered in DOUGLAS'S pouch; its cavity lodged an ascaris. No communication with the rectum could be found. The patient died of purulent peritonitis on the third day. At the necropsy a perforation was discovered at a point where an adhesion had been apparent. Two fistulous tracks led from the rectum into the cavity of the abscess where the ascaris was found. KOON believes that the ascaris had burst into the rectum, the peritoneal effusion passing from the bowel into the abscess cavity. B. M. F.

Current Medical Literature.

MEDICINE.

Tight-lacing and gall-stones.

ACCORDING TO DR. MAROAND, the relation of tight-lacing to the development of gall-stones is rendered very clear by noticing the situation of the gall-ducts in the liver deformed by tight-lacing. The furrow caused by lacing runs directly across the right lobe of the liver, as the result of which there is a tendency to atrophy of the gall-bladder. When tight-lacing has been practised to an extreme degree, an artificial fissure is formed in the liver, giving rise to what is termed the "lacing-lobe," which carries with it the gall-bladder. The constricted portion of the liver is found to be just at the point of junction of the gall-bladder with its duct. In these cases, according to the author, it is common to find the gall-bladder greatly distended, extending far beyond the border of the liver, and frequently an examination made *post-mortem* reveals the presence of gall-stones. Stagnation of the bile is well known to be one of the most important causes of the formation of gall-stones. A change in the composition of the bile, from catarrh resulting from congestion of the mucous membrane and the thickening of the bile due to failure of the gall-bladder to completely evacuate itself, gives rise to formation of small masses which serve as nuclei for calculi; hence anything which obstructs the free outflow of bile through the cystic duct must favor formation of gall-stones. MAROAND is also of the opinion that many cases of cancer of the liver should be attributed to tight-lacing. It is only a few years since LANGENBECH was obliged to open an abdomen to remove a "lacing-lobe" of the liver which had been so completely separated from the rest of the organ as to cause its death, rendering its removal necessary. In view of such facts as these, it is the duty of every physician to take special pains to warn his patients against the evil effect of this pernicious practice. Few women are conscious of the fact that they are injuring themselves by tight-lacing. But physicians generally preach to deaf ears in an audience composed largely of votaries of fashion.—*N. Y. Med. Rec.*

Hemiplegia without Brain Changes.

DR. JACOBSON of Copenhagen has observed six patients in whom, clinically, the usual symptoms of a typical apoplectic attack were present, but careful examination of the brain failed to reveal any lesion except wide spread arterial sclerosis. He also collected the records of thirty-two other cases described by various writers, and by a comparison of these with his own cases he finds that the hemiplegia in those patients manifests itself during an illness of some kind, most frequently during uremia, but also during phthisis, or after pneumonia, lead-poisoning, or puerperal fever. The hemiplegia present in all respects the same as that associated with a definite local lesion and is usually fatal soon after its onset. DR. JACOBSON believes that in these cases the hemiplegia depends upon some circulatory disturbance, determined possibly by some inequality of pressure on the two sides of the brain, and that the cases usually end fatally because of the advanced age of the patients and the arterial sclerosis which is present, assisted perhaps by the toxic condition.—*Lancet*.

The Communicability of Leprosy.

BURNES has made some interesting observations on this point in the poor houses in Fiji. Though leprosy has existed for long there, it had been noticed of recent years that the number of fresh cases showed an increase, and that the epidemic leprosy exhibited a progressive character. In the poor houses after a series of cases occurred, of course most in

aged persons; of these some had lived from fifteen to twenty years in the house, but in all cases on less intimate association with leprosy subjects could be proved. Most of the cases assumed the tropho-neurotic type. The observations described serve to indicate the danger of prolonged coexisting with infected persons. As bearing on the treatment of leprosy, a case is related in full, in which guaiacum balsam applied externally and administered internally for nearly a year was shown to the Medical Society of Liverpool as cured, was discharged, was shortly after re-admitted with oedema of the face and extremities and a recurrence of the disease.—*Brit. Med. Jour.*

Alleged exceptions to Collier's Law: Is Congenital Syphilis Infectious?

IN THE *British Medical Journal*, DR. H. W. FARRER throws doubts on the truth of this "law," at least at the present time. During some ten years' work in the outpatient department of the Children's Hospital at St. Mary's, he scarcely remembers to have seen a single reliable case of infection by a congenitally syphilitic father. He accounts for this immunity thus:—"Perhaps a condition of syphilisation is being gradually brought about; whereby the intensity of the poison is being slowly attenuated; or are the earlier recognition of the disease in parents and its more thorough treatment responsible? In other words, has inherited syphilis changed in type since COLLIER laid down his law? and is this the reason why so few exceptions to this law are found? If children do not infect those who are not related to them, it is not surprising that the mothers who have borne them should escape."—*Univ. Med. Jour.*

A new and distinguishing Sign of Latent Aneurysm of the Aorta.

THIS sign, according to W. C. GLASGOW (*New York Medical Journal*) is the presence of a systolic sound in the brachial artery, synchronous with the cardiac systole, and sometimes accompanied by an arterial murmur. When this sound can be heard, and aortic regurgitation can be excluded, a positive diagnosis of aneurysm can be made, even in the absence of all other signs or symptoms. The sound is due to the rapid tension of the walls of the only partially-filled artery, due to the sudden impact of blood at the heart's systole. In pure aortic regurgitation the sign is always present; in two out of six of the reported cases of aneurysm the diagnosis was made from this sign alone four months before the appearance of the recognised physical signs. In all six cases the systolic sound in the brachial artery was present; five were intra-thoracic aneurysms and one abdominal.—*B. M. J.*

Cramps as a sign of Diabetes.

SIR BENJAMIN WARD RICHARDSON (*Apothecary*) calls attention to the occurrence of cramps in the lower limbs in cases of diabetes. They are rare by day, and most common at night. They are very painful, although not of long continuance. They occur principally in the muscles of the calf of the leg, but they may also involve other leg-muscles and, at times, even distant muscles. In conjunction with this condition there is sometimes a painless motion or twitching of the leg-muscles, observable mostly in the early morning after good sleep, and lasting two or three hours, but passing away during the day. These movements may number thirty or forty in the minute.—*Med. News*.

SURGERY.

Statistics of Intestinal Excisions.

E. BREUER publishes in *Zeitsch. f. Chirurg.* his statistics of excisions of the intestines in THANNHARDT's clinic at Bonn for the last ten years. They number thirty-three as follows: Five for strangulated hernia, eleven for artificial anus following strangulated hernia, two for stone, one for

operation, for the local stricture following perityphilitis, and for the local stricture from a ruptured colon, three fistulous openings led to tuberculous abscess for tumors. These three cases resulted in twenty-one cures. An examination of these statistics shows that an artificial anus gives better results than intestinal resection in the treatment of strangulated and gangrenous hernia. Also that in this case it is the rule first to create an artificial anus, and, if necessary, later to resect the intestine.—*N. Y. Med. Rec.*

On the prophylactic treatment of Ophthalmia Neonatorum.

CREDE in 1884 published a paper on the prophylaxis of ophthalmia in newly-born children, and the method he advocated was the instillation into the eyes of a drop of a 2 per cent. solution of nitrate of silver. His statistics proved without doubt the immense value of this plan, and there is no question that it is thoroughly efficacious; but, unfortunately, it sometimes causes a considerable amount of swelling of the eyelids. Nothing seems to answer so well as nitrate of silver, so that BUDIN has recently made experiments with weaker solutions of the same substance. Instead of using a solution of 1 in 50, as advised by CREDE, he employs a solution of 1 in 150, which has the great advantage of causing no irritation or swelling of the lids. He has watched the results of this method in 2,004 cases, and among all these there have been only two cases of purulent ophthalmia. In one of these cases, owing to an oversight, the prophylactic solution had not been used, and in the other the ophthalmia which showed itself on the second day was cured by the eighth. All the above cases occurred in hospital practice, but he states that he has had equally good results in private practice from the same method of treatment. The occurrence of purulent ophthalmia in the proportion of 1 to 1,000 cases shows that the employment of a solution of nitrate of silver of the strength described above is quite as efficient as the stronger solution recommended by CREDE, and moreover is free from the disadvantages possessed by the latter. The farther preparation of irrigating the mother's vagina at the commencement of labor with a solution of perchloride of mercury 1 in 4,000 should not be neglected.—*Practitioner.*

Successful Laparotomy for Revolver Wound of the Abdomen in a Pregnant Woman.

M. ALBARRAN presented to the Société de Chirurgie a young woman aged nineteen years who was admitted to the Hôpital Cochin for a bullet wound in the umbilical region at a spot four fingers' breadth from the median line. Five hours and a-half after the receipt of the wound she had vomited only once—during her removal to hospital. The patient was collapsed, and there was ascertained to be some dulness at the lower part of the abdomen. A penetrating wound with internal hemorrhage was diagnosed, and immediate laparotomy was had recourse to. During the preparations for the operation the state of the breasts led to a vaginal examination, and a pregnancy advanced to from the fourth to the fifth month was detected. Four wounds of the small intestine, necessitating the resection of twenty centimetres of the bowel, were seen directly the abdomen was opened; a fifth intestinal wound was sutured, and search for the source of hemorrhage which continued, revealed a perforation of the mesentery involving a branch of the superior mesenteric artery, which was tied. The fundus of the gravid uterus was the seat of a small wound through which protruded a loop of the intestinal cord. Wishing to terminate the operation promptly, M. ALBARRAN sutured the loop on a level with the vaginal surface, the stump being returned into the uterine cavity. The abdominal incision was then quickly

closed. The case was reported by the author with much interest on account of the late date of the operation.

The Triumph of Peace in a Dangerous Operation.

THE session of the LANCET on Wednesday, 18th, was made remarkable by the presentation of a patient by M. PEAN.

This patient had had a carcinoma of the larynx, and to relieve it, it was necessary for M. PEAN to make entire extirpation of the larynx, the superior portion of the Oesophagus and the inferior portion of the pharynx. Not only did the patient support the mutilation, but by means of a prosthetic apparatus constructed by M. NICOLAI, under the direction of M. PEAN, the organs were replaced, so that the patient could breathe, eat and drink. Not only that, but the apparatus allowed the patient to make articulate sounds, so that speech could be understood. It is two years since the patient was operated upon, and the crowning glory of the operation has been the phenomenal, nay, the brilliant success of the artificial larynx. In former times the saving of the life of a patient so afflicted would in itself have been a triumph of surgery, but to replace lost parts with apparatus of such delicacy and usefulness seems to represent an art almost superhuman.

A new Operation in Glaucoma: Sclerotomy.

NICOLAI recommends the following operation with a very narrow knife: The blade, with cutting edge downward, is introduced in the sclero-corneal margin in the inferior angle of the anterior chamber, passed horizontally across the anterior chamber parallel to the iris, and is brought out through the sclerotic. The blade is then turned on its axis ninety degrees with the edge toward the iris. This makes in the sclerotic an incision perpendicular to the first, and the aqueous humor at once pours out. The blade is then rapidly withdrawn, and the iris is divided at its peripheral attachment throughout the length of the wound.—*Rev. gen. Ophthalm.*

Treatment of Gonorrhoea.

DR. H. M. CHRISTIAN claims that irrigation of the urethra with potassium permanganate, 1 to 4,000, doubled in strength the second week, is the best remedy for simple non-infectious urethritis. The irrigations are made daily with about one quart of a warm—not hot—solution, the patient standing and the reservoir at a height of six feet. A cure can be effected in from ten to twelve days. This cannot be solely relied on for a specific urethritis, but to a certain point he considers irrigation the proper treatment—relieving *odor-urinae* and chordee promptly and largely preventing such complications as total urethritis and epididymitis.—*Jour. of the A. M. A.*

Mastoid Suppuration.

THE technique of operating should vary with the nature and needs of the case. Usually a fibrous incision close behind the auricle, free exposure of the bone, and penetration by the gauge close behind the auditory canal below the level of its upper margin and the *apex supra meatus*, is safest and surest to reach the antrum.—*DR. RANDALL, N. Y. Med. Rec.*

Small Tympanic Perforations

DR. HARRIS says, may be positively diagnosed by blowing finely pulverised boric acid against the drum until it is coated. Examination a few hours later will show a dark spot, where the secretions have passed through.—*N. Y. Med. Rec.*

Contracted Uterus

Is alone sufficient to cause uterine inflammation by reflex irritation, and when such a condition exists, treatment must be directed against the uterine system of the organ.—*DR. WHITE, K. Y. Med. Rec.*

Permanent Transplantation; the cause of Failure and the Remedy.

GUERARD states the following advantages for his method of transplanting:

1. It permits of the use of as large a graft as may be necessary, yet the elastic openings in the flaps, if properly made, will hold it in good position.
2. The elastic band also gives circular and uniform union without any bulging at points intervening between the flaps because of the size of the graft.
3. It furnishes the largest surface possible for union, offering the best opportunity for healing in a manner to allow the greatest freedom for the passage of nutritive elements through the lymph channels of the corneal tissue.
4. Large additional channels of nutrition are afforded, without the intervention of any corneal sows, through the large conjunctival flaps.
5. The cicatrix is placed obliquely through the most vascular area in the border of the cornea, and therefore in the most favorable position.—*Amer. Jour. of Ophthal.*

Hæmorrhage after Tonsillotomy.

MIX together tannic acid, three parts; gallic acid, one part; add a few drops of water. Knead powder until it is a hard mass; take from it sufficient to form a ball the size of a small marble. Place this on forefinger of hand corresponding to side of patient from which hæmorrhage occurs, and introduce into patient's mouth, rubbing it firmly against bleeding surface, making counter-pressure with palm of other hand on side of head over region of tonsil.—*HÖVELL.*

OBSTETRICS AND GYNÆCOLOGY.

Pregnancy with Unruptured Hymen.

GUERARD relates three new cases of pregnancy in which the hymen was persistent. In the first and second there was a protracted second stage due to the resistance of the hymen, which was perfect and very elastic. After a crucial decision the fetuses were at once delivered, but in one case the child was lost. In the third case the patient appeared to be in the seventh month of her first pregnancy, and suffered from severe pain in the genital tract. Although she had twice been operated on for atresia of the hymen, the vagina was still closed by a firm, impermeable, and tender membrane. This was excised, the pains disappeared and the pregnancy continued and ended naturally. GUERARD notes a case of bifid perineal hymen where the openings barely admitted a hair; yet the patient reached the third month of pregnancy, and abortion was induced in a manner which could not be ascertained. In considering these cases, he notes how the alkaline uterine mucus, poured out during orgasm, protects the spermatozoa from destruction by vaginal mucus.—*B. M. J.*

An unusual Obstetric Experience.

DR. E. G. BOWERS, of Fair Haven, Vt., writes:—"From a Welsh newspaper of recent date I translate the following account of an unusual occurrence, which took place during the late severe weather near Rhosmarket, Pembrokeshire, Wales: A young married woman left her home in the parish of Sertwa with the intention of walking to her mother's house in Rhosmarket—a distance of about four miles—where she intended to stay until a certain expected event should take place. Her mother walked half way to meet her, and was thunderstruck to see her carrying a newly born babe in her arms. The mother and child were taken to the nearest house as quickly as possible, where another child was born shortly after. This happened within a matter of minutes with deep snow covering the ground. The reporter does not state whether the mother or children suffered from their hard experience, but

from its silence it may be inferred that the case did not end in *Mis. Misc.*

The Etiology of Puerperal Fever.

THE *Lancet* recently printed the following deductions from DR. HENRY's remarks in a discussion of puerperal fever:

- (1). Puerperal fever is produced by micro-organisms which get into the system through wounds made in child-birth.
- (2). These organisms are transferred by contact. They are not inhaled or swallowed.
- (3). The transference of organisms is prevented by cleanliness, and the organisms are killed by antiseptics.
- (4). The hands are the usual poison-bearers; next in frequency, clothes and instruments.
- (5). Investigation of a particular outbreak of puerperal fever should begin with inquiry into the precautions taken by doctors, nurses, and midwives to secure the cleanliness and disinfection of their hands, clothes, and instruments.
- (6). There is no such thing as self-infection with puerperal fever. The causes supposed to produce "auto-genetic" puerperal fever produce, in lying-in women defended by antiseptic poison, only trivial illnesses.
- (7). The inhalation of sewer gas causes in the puerperal woman the same symptoms as in other persons. There is no good evidence that, in women protected by antiseptics from septic poisoning, it produces symptoms like those of septicæmia.
- (8). The poison of erysipelas of the skin produces in lying-in women erysipelas of the skin, and no other illness. But the poison of the disease known as phlegmonous erysipelas of cellular tissue produces puerperal fever.
- (9). The poison of scarlet fever produces in lying-in women scarlet fever, and no other illness.—*Canad. Prac.*

Cold Bath in Puerperal Septicæmia.

THE cold bath is contra-indicated when peritonitis, phlegmon of the broad ligaments, or phlegmonous dolens exists. It has proved successful when grave maladies, such as measles, erysipelas, eclampsia, or bronchitis have complicated the puerperal infection. Treatment must not be delayed when high temperature and general constitutional disturbance have set in. First of all, make sure that the uterus is free from the products of conception. Then, should the temperature rise over 101°, the bath must be used. It is often of value when the temperature is lower, the patient already suffering from headache and hot skin. The bath should be a little over 75° F., as a rule. It is right to leave the patient in till she shivers, especially when hyperpyrexia is the most marked symptom; in other respects the same precautions are needed as in typhoid fever. Subcutaneous injections of caffeine or sparteine should be given before the bath when the symptoms are severe, so as to counteract the tendency to syncope.—*Nace, in Med. Age.*

Absorptive Power of the Vagina.

COER AND LEVI have recently made some observations on the absorptive power of the vagina under various conditions of health and disease. Iodide of potassium is easily absorbed. If a tampon soaked with a 20 per cent. solution be introduced into the vagina, iodine can be found in the urine in an hour. The excretion reaches its maximum in twenty hours and ceases in forty-eight hours. Fever and pregnancy increase the absorption. Hysterectomy makes an difference. Iodine is absorbed slowly and in very small quantities, but more if fresh than if old. Salicylic acid is absorbed quickly, appearing in the urine in one hour and disappearing in twenty-four hours. Gold is very readily absorbed. Antipyrin is absorbed in an hour and a half, and is found for

and weight loss, but the respiratory action is unable to compensate with administration by the stomach. In brief, the system has exhausted its compensative power, and this is increased in pregnancy, in the puerperal state, and in pyrexia.—*B. M. J.*

Feeding Premature Infants.

CHAMBERS read notes last autumn at a meeting of the Paris Obstetrical Society, on a child which at that date was thirty-one months old, and of a fine physical and mental development. It was delivered at 5½ months, or at the latest computation at the 6th month. It weighed at birth less than 5 lbs. (850 grammes). By aid of the cowmilk and the most careful feeding it was successfully reared. MAY-CRISTEN declared that he had in one of his wards a six months' child a week old; it weighed only 770 grammes, or under 1 lb. 15 oz., but it seemed to be sinking. BUDIN observed that he had known 6½ months' babies to live for a day or two. The respiration was almost purely bronchial, the lungs did not beat, and the vesicles were found full of epithelial cells. It is easy to believe that a strong premature infant could succeed in clearing the pulmonary vesicles and live. CHAMBERS had successfully reared an infant which weighed less than 2 lbs. 5 oz. at birth.—*B. M. J.*

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PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The normal situation of the Gall Bladder in Males.

JOHN B. HAMILTON, M.D., Chicago, says:—"To find the gall bladder, draw a line from the anterior superior spinous process of the ilium to the centre of the xiphoid appendix. Intersect this with a line from the umbilicus to the tenth costo-cartilaginous junction. In the right upper triangle near the apex, but nearer the right oblique line, the fundus of gall cyst will be found. A needle thrust through the abdomen at the point indicated, will usually transfix the gall bladder. The position of the gall bladder varies with the changes in the position of the liver; in enlargements it is pushed downward, and in some cases deflected to the right."

Comparative Pathology of Necrosis.

ISRAEL summarizes his observations with vegetable cells and animal tissues into three groups of pathological changes:—(1) *Changes in the cell protoplasm* comprising: contraction of the protoplasm in clumps; disappearance of the reticulum or protoplasmic stroma; retraction of motile organs; extension of minute spherical particles from the cell substance; general granular changes in the homogeneous protoplasm; discharge of the coloring matter from blood or chlorophyll corpuscles into the surrounding fluids with alteration of the color and diffuse staining of the cells by the pigment absorbed from the fluids; alteration in the staining reaction of the cells. (2) *Alteration in the form of the nucleus* with swelling of the nucleus; dissolution of the reticulum and nucleus; formation of fine diffuse granulations and alteration in the staining reactions. (3) *Alterations in the permeability of the cells*. Further investigation is needed of definite applications.

The effect of Serum Injections on the Temperature and Pulse.

VARIOT has studied this question. All children under suspicion of diphtheria, who are admitted into the Treutmann Hospital receive, as soon as they come in, an injection of 50 c.c. of diphtheria antitoxin. This practice has given the author the opportunity of observing the children, who do not develop diphtheria, the physiological effects of the serum injections. His observations show that they cause a rise of

temperature of from 37.4° to 38.4° C. and a fall in pulse rate. At the same time the heart's action is increased, and the pulse becomes more frequent. These phenomena are explained by cardiac asthma and erythema of the skin. He thinks it probable that the artificial fever which is certain part in the process of cure, being analogous to the normal febrile reaction seen after various but possible diphtheria before the serum came into use. HARRY pointed out that in 8 cases in which he had used the serum in such patients no rise of temperature followed the injection. VARIOT thought it possible that the febrile reaction might have been overlooked in these cases owing to the temperature not being taken with sufficient frequency.—*B. M. J.*

Measurements of a Selected Venus.

OUR of five hundred applicants—most or less—for the position of a bronze Venus, in a New York show, one little woman filled the bill, whose measurements are said by her to be the following. She thus announces her statistics: "One artist says my figure is one of the best that he has ever seen, and I think myself the measurements show up very well. I am 5 feet 7 inches in height and weigh 144 pounds. My other measurements are: bust, 38 inches; waist, 24 inches; thigh, 22 inches; calf of leg, 15 inches; ankle, 9 inches; foot, 9 inches in length. My upper arm is 11½ inches, and my neck 18½ inches. Many women have figures superior to mine in certain points; but it is a most difficult thing to find a perfect, all-round figure."—*Jour. of the A. M. S.*

Post-mortem Appearances in Myxodema.

K. GRON performed an autopsy on a woman who had suffered for five years from myxodema, and found that the median portion of the thyroid gland was completely atrophied and the lateral portions reduced to mere traces. The cerebral hypophysis was hypertrophied, being the size of a walnut, and entirely filling the sella turcica.—*Univ. Med. Jour.*

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PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Disinfection of Tubercle-infected Houses.

Drs. DELPINE and BANSOME, of London, have made an extended study of the various methods of disinfection, and the influence of certain natural agents on the virulence of the tubercle bacillus. They sum up their results as follows:—

(1). The disinfection of rooms which have been contaminated with tuberculous products cannot be obtained by means of the fumigation methods generally used at present. Sulphurous acid, chlorine, and eucalyptus, as used under supervision by experienced municipal disinfectors, have proved practically useless. This only confirms the results obtained by KOCH and his pupils in the case of a number of other organisms.

(2). The only other method of disinfection which seems to promise more satisfactory results is the direct application of a solution of chlorinated lime to the walls to be disinfected. This method has so far given satisfactory results, but is attended with discomfort on the part of those who have to carry out the disinfection, though this difficulty may be overcome. It must be remembered that the experiments of BERTHE and FROBERG are unfavorable to the use of permanganate of potassium.

(3). Light, in the case of the tubercle bacillus, as it has been proved by several observers to be in the case of other organisms, the most important natural disinfecting agent.—*B. M. J.*

Forced feeding of Children.

NUTRITION upon a child's mind, says Dr. H. H. HARRIS, is a waste of time and money to waste the child's health. When

the fact of getting a limited amount of the clothing made
during winter months is a good thing and then make the whole
the fact of getting a limited amount of the clothing made

When appetite begins to fail, try to discover the cause and remove it. Never tempt the palate with rich, unwholesome foods, or pasting preserves, highly seasoned meats, etc. Failing appetite is often a symptom of some digestive, disease, or of constipation or clogging of the digestive or eliminative organs. Fasting for a few weeks at such a time, will give nature a chance to successfully contend with and remove the waste and other poisons which were hindering the work of nutrition.—*Good Health.*

The Stenseth Test in Murder Trials

In the Boston Medical and Surgical Journal. DR. GUSTAV LIEBMANN contributes a short paper on this subject. He states that the object of this test is to ascertain, by the presence or absence of solid contents or by the intermediary stages of digestion of food found in the stomach, how far the process of digestion has advanced, giving thus a clue as to the time at which the death of the writer has taken place, provided the time of the last meal be known. In order to arrive at an exact, or at least approximately exact conclusion, the first and imperative condition would be a uniformly established schedule of time in which the different phases of digestion should be completed. If there be such a physiological law, from which there is practically no deviation, we should place full reliance upon the test; but if there be, in healthy people even, numerous exceptions or deviations, the test must of necessity be open to errors. DR. LIEBMANN considers that this latter proposition is the true one. The different variations in the duration of the digestive process depend upon the following conditions:—1. The length of time necessary for the transformation of solids into chyme in healthy individuals varies a great deal according to the digestibility of the different foods. 2. The length of time necessary to expel the ingesta from the stomach into the duodenum in the healthy individual varies according to the quantities of food taken. Not only does it take a longer time for larger quantities to be expelled on, but the motor activity of the stomach walls is diminished by the greater distension produced by the larger amount of food present. Thus, pieces of meat are frequently found a day, or longer, after ingestion. 3. The shorter or longer stay of food depends on the amount of acidity, which varies in different stomachs even within the border lines of health. 4. Much variation even in health is caused by individuality, by presence or absence of pepsin, hydrochloric acid, psychical factors, and emotions (fright, fear, grief, or the opposite, as joy or exaltation). We see, therefore, that owing to the many physiological variations, which do not permit of any reliable deduction, even in the healthy, the forensic value of this test must be considerably limited.—*Lancet.*

THERAPEUTICS AND PHARMACOLOGY.
Gonorrhoea.

Is seen during the inflammatory stage, give *sloin pills*, 1 grain (0.065 gramme) each, to produce active purgation. This is an important point often overlooked. Not only does the *sloin* improve the appetite, but it also prevents chordee and granuloma, agnathia, and renders the inflammation less severe. Twist a fine layer of cotton-wool about a half-inch thick, cover it with ointment made of dilute nitrate of mercury to which morphine has been added 1 grain to the ounce (0.055 gramme to 31 gramme), and pass into the nostril three or four times a day. At the same time give an alkaline mixture containing *hydrocyanic*.

Eighty-five days after onset, three weeks have passed,
the infection of lower small intestine & duodenum //

giveness). In 3 groups (100 specimens of all species) with equal doses of a suspension of spores taken from the mouth. Give also to prevent the spread and growth of the disease caused by the spores. In 1 group, 100 specimens (more than 100) of all species.

One of the Best Injections for Acute and Chronic Chorea.

Salphos, 70 grains, 3 grains (0.3 gramme); *Salphos* of *ossein*, 70 grains (0.65 gramme); *Salphos* of *potash*, 5 grains (0.32 gramme); *glycerin*, 15 grains (1 gramme); *sacchar* to 1 pound (51 gramme). Always inject immediately after micturition. Introduced slowly 1 ounce (15 gramme) of the fluid into the urethra, allowing it to remain about one minute, then letting it flow out. C. L. KINGS, King's College Hospital, *Clinical Jour.*

Vaselin in Ergipelen

H. KOSTER, of the Ballingræn Hospital, has made a study of the relative value of the various common methods of treatment of erysipelas. The duration of the fever appeared to be the same when vaselin was used as when GUERIN's water, caliche applications, ichthyol and vaselin, and sublimated mercury were employed. None of these remedies were capable of checking the process with certainty, and in exceptional cases this spread over almost the whole surface of the body. The complications, especially the phlegmasia process, did not appear to be greater after the use of vaselin than when other measures were used. Consequently the author regards vaselin as quite as efficacious as the other well-known topical remedies, and preferable because inoffensive, cheap, without disagreeable odor, and producing no irritation.—*Brit. Med. Jour.*

Subcutaneous Injection of Oil for Stiffened Joints.

SIR BENJAMIN WARD RICHARDSON relates that in two instances of stiffened joints in which the inability to move the parts appeared to depend upon rigidity of the tendons and muscular sheaths, he injected, subcutaneously, olive oil into the structures and with joint motion. He found that a fluid dram of oil could be injected around the knee-joint without causing inflammation or discomfort. In one instance in which the elbow was thus treated the patient obtained, for the first time, some degree of movement after six months entire rigidity from fixation.—*Med. News.*

General Pertinaxia

KEEP the patient without food for several days. Apply two or three leeches to the most sensitive portion of the abdomen, and supplement their action by thin poultices Neapolitan ointment, or warm, soothing applications. Also give calomel in small doses after the leeches have been removed. Give internally a glass of lead water, containing 10 to 20 drops of laudanum, in teaspoonful doses, from time to time, to allay the pain. If this cannot be retained, give a small enema of tepid water containing 70 drops of laudanum. In six severe cases thus treated by the author the results were most satisfactory. —RENTILLO.

Distribution

Dr. EISENBERG, of Frankfurt-on-the-Main, reports favorable results in this disease from the administration of yucca glycosid, in the daily dose of from eighteen to thirty drops, given in three doses, suspended in milk or cod liver oil. The patients were allowed to drink beer, and were upon a miscellaneous or mixed diet. At the end of eight days there was a notable diminution of sugar. After four weeks of treatment the patients were able to partake of some saccharine foods without increased glycosuria being produced. The urinary effect upon the glycosuria was still more pronounced. At the end of several days of treatment, the amount of urine passed

...the by the The the drug was well borne.—
... ..

The Treatment of Coffer with Thyroid Gland.

During the past few years cases of goiter treated by means of the administration of thyroid gland, cases of the parenchymatous variety being selected. Of this number nine were cured or improved, while three proved refractory. Fresh uncooked glands obtained from sheep and cows were employed, and administered in doses of from 75 to 150 grains in cachets or upon buttered bread, at first every two or three days, but subsequently once a week.—*Med. News.*

Lemonade Powder.

| | | | | |
|----------------------|-----|-----|-----|-------|
| Tartaric acid | ... | ... | ... | 5j. |
| Oil of lemon | ... | ... | ... | ℥i. |
| Tincture of turmeric | ... | ... | ... | 5j. |
| Loose sugar | ... | ... | ... | 3xvj. |

Mix the tincture and oil with a few ounces of the sugar, then add to the bulk, and sift.

Label for 1-oz. Packets.

Empty this packet into a pint of cold water, and it will produce instantly a pint of lemonade.—*Chemist and Drugg.*

To prevent Iodism.

The following method of exhibiting iodide of potassium is said to be effectual in preventing the untoward effects of the drug, as coryza, depression, etc.:

| | | | |
|---------------------------|-----|-----|-------------|
| R Potass iodidi | ... | ... | ounce ss. |
| Ferri. et ammon. citratis | ... | ... | dram j. |
| Tr. nucis vomice | ... | ... | drams ij. |
| Aque. | ... | ... | ounces jss. |
| Tr. cinchon. comp. ed. | ... | ... | ounces iv. |

M. Sig.—Give a teaspoonful in water after each meal.—*Med. World.*

Correspondence.

VILLAGE SANITATION IN INDIA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—It is much to be regretted that the subject of village sanitation has not received that consideration from Government which it deserves. Although it was taken up by the Indian Medical Congress, nothing practical has yet come of it. The good effects of sanitary reforms in municipal towns have been so conspicuous that no proofs or demonstrations are necessary to prove their efficacy in decreasing the general ratio of mortality. Why should then the boon of self-government granted to us by our British Government be denied to the majority of Her Majesty's Indian subjects, namely, to the rural population? It is true that our villages are not so thickly populated as our municipal towns, and consequently the ill-effects of unsanitary conditions are not so glaring in them as in the latter places, but nevertheless the rural population suffers as much as the town population does. There is not a single village which is not visited by the most virulent types of cholera, dysentery, measles, mumps, whooping cough, influenza, small-pox, enteric fever and other epidemic diseases carrying away a number of its inhabitants yearly; while the all-pervading influence of malaria, apart from its own numerous victims, gives—to use Dr. Crookall's phrase—a new characteristic to each of

these villages. The same is true of the sanitary conditions of the villages of the Punjab and the treatment. No doubt the condition of the people and that of the in the way of effecting any sanitary improvements in our villages on an extensive scale, but some improvements can, I think, be effected in them without any or with very little increase of expenditure. An attempt to sketch out the most conspicuous sanitary defects of our villages and to hint at some of the means to remove them without any very great increase of expenditure had been made by me in a paper—perhaps then the first of its kind—in the July number of the *Indian Medical Gazette* of 1890, to which I would beg to refer your readers to see if something can be done to improve the health conditions of our villages, without much hardening the State or oppressing the people, and thus prevent a number of their fellow-brethren from finding an untimely grave.

Yours &c., PURNA CHANDRA DAS GUPTA,

Assistant Surgeon.

KISHOREGUNGE, 23rd May 1895.

POISON IN THE COMMUNION CUP.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—With reference to the several articles regarding "Poison in the Communion Cup," the antidote for the poison is the old Mosaic and Levitical sanitary principle of the Passover and the giving of this mysterious Lord's Supper in one, that is, both bread and wine, mixed and combined, or as wafers dipped in the juice of the grape according to the Eastern churches. It is said to be for indicating the crucifixion of the Lord and the sacrifice of atonement that the bread and cup were given separately, and that after resurrection as the body and blood become one again, it is necessary to give both in one. Further, if there be faith, the combined one is enough, and at the same time no brother need be offended thereby on the score of cleanliness or any other sanitary principle. It is also on the law of "prevention being better than cure." It is also known that actual poison has been sometimes mixed with the cup and administered with the desire of revenge, &c. On the whole, the array of cups and glasses may be avoided if communion is held in one sacred symbol, and it will thereby prevent contagion of different kinds. Besides this rite need not be compared with the Masonic ceremony nor the "Sakid fasting." Keeping dirty Bibles too, makes men sin both ways. Purity is good. Passing the cup round in convivial parties, clubs, canteens, eating from the same dish, and smoking the same pipe are equally bad.

Yours, &c., M. VANDERBEEK,

Assistant Surgeon.

CANNANORE, 11th May 1895.

(We publish this letter, though we do not believe in its contents. There are two books of Christians having two methods of administering this sacred feast, one combines the elements, the other keeps them apart. Whether one is less or more hygienic than the other, we will not quarrel upon. There is a definite hygienic objection to a single cup, and we are sure a reform in this direction will soon come.—Ed., &c.)

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I beg a note of warning to other practitioners (through the medium of your valued paper), who might not have experienced the same danger. I had a case of dysentery for whom I thought fit to order a mixture which was prepared in a first-class chemist's establishment, and was as follows:—Pulv. gum acacia 3j, sinneraba bark 3j, parched rice 3ii, added to one pint of water, and boiled down to a decoction measuring 9oz. Strained. Dose 3j thrice daily. This was made up on the 7th February 1895, and noticing that it seemed to have rather too much of a nauseating effect on my patient, I discontinued its use after four doses. The remainder stood in the bottle, corked, which of course must have got firmly glued down; the neck-fermentation had been going on unnoticed by me, till the 21st inst., when a brother practitioner, who happened to be seated in my office, was startled by a sudden loud explosion in the next cabin (a green huize curtain separated the two) and which sounded, as he said, like a revolver shot. On stepping in to ascertain the cause, he found the bottle containing the above preparation burst into atoms with fragments of glass scattered about in all directions. This he pointed out to me.

Yours, &c., A. BEALE, J. M. S.

Asst. Surgn. in medical charge R. I. M. S. Clinic.
BOMBAY, 2nd March 1895.

A WORD TO YOUNG PRACTITIONERS—A BULL SOMEWHERE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I have but just seen the issue of the *Record* containing my letter, and find that I have been credited with statements I am certain were never made. I am therefore surprised how my letter has been made to read as printed. I have been made to state "that disease exists for the pleasure of finding it out;" whereas what I stated and meant to infer was "that the satisfaction excited by the clever differentiation of disease, in the place of indifference as to the necessity of careful diagnosis, would engender the feeling that disease exists but for the pleasure of finding it out," and again I am made to state "that the best physician with the best ability is he who prescribes the greatest number of remedies" instead of "he is the physician with the greatest ability who prescribes the least number of remedies." I am sure that the statement in the preceding paragraph of my letter should have made your "men of scissors" reflect, before giving any letter such a contradictory conclusion. He might have "gone the whole hog" while he was about it, and made me state "that the best physician with the best ability is he who kills the greatest number of patients."

Yours &c., D. O. C.

21st May 1895.

We gladly allow space for our correspondents' corrections of his final letter, and we are sorry to show him his original manuscript to prove that the "bulls" originated from his cerebral garden.—ED. I. M. R.

POTASSIUM PERMANGANATE AS A FILTER.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Reading Dr. HANKE's letter in the *Illustration* of water, published in the *Standard*, I observe that his remarks about filters being a breeding source for microbes, and that he is now experimenting with potassium permanganate as a means of cleansing and disinfecting wells. As regards filters, I have always advised my friends and patients for the past twelve years to pour a kettle of boiling water through their filters and immediately after, a quart of potassium permanganate solution one grain to the ounce, and to repeat the process every fortnight. For the past six months in Cochin I have had put into the garden wells every month alternately, lime and permanganate of potash, with the result that cholera has not only been considerably reduced, but on two gardens, which were notorious for outbreaks of this disease, not a single case has occurred to date from time of using. The wells were first thoroughly emptied out by one and cleaned and also drained, besides being kept otherwise protected from external contamination.

Yours &c., ALF. MCCABE-DALLAS, L.M. Dub., L.R.C.P. &c.
KUMBHAR, 22nd May 1895.

REVIEWS.

HEALTH AND CONDITION IN THE ACTIVE AND THE SEPTENTARY. By NATHANIEL EDWARD YORKE-DAVIES, L.R.C.P., M.R.C.S., L.M., Author of "Foods for the fat"; "The Dietetics of Obesity"; "Aids to long life"; "Medical Maxims," &c. (Published by Messrs. SAMPSON LOW, MARSTON AND Company, Ltd., Fetter Lane, Fleet Street, London, E. C.) 1894. Pages 260.

This is an excellent health manual. Indeed the name of DR. YORKE-DAVIES, is in itself quite a sufficient guarantee that the work under review is sure to be a treat to the reader and a valuable contribution to contemporary literature on health and the treatment of disease by the regulation of diet. This method of cure, of the very many ailments brought on through errors in eating and drinking, though not new, is of vital importance to the patient's well-being, not only because more rational and more successful than drugging, but also because it is so often apt to be overlooked, or given a very subordinate place in treating these ailments of "high life," not only by the patient himself, but sad to say, also by his medical attendant. Hence the subject needs emphasising and recapitulation, "line upon line, and precept upon precept," and DR. YORKE-DAVIES needs no apology for placing his most useful work on the market. Nay, on the contrary, he has earned the thanks of the profession for so doing.

The work is divided up into 28 chapters, the first 12 of which are taken up with the considerations of long life, death, food and exercise, nutrition, &c., then follow 3 chapters on work, (wear and tear) exercise and rest, and wines and other beverages. The remaining 10 chapters contain the pathology, description and treatment, &c., of the following ailments:—Obesity, gout, indigestion, excessive leanness, constipation, biliousness, Bright's disease, diabetes, anemia, neurasthenia, headache, acidity and ailments due to mal-assimilation of food and errors in the mode of life.

The paper, printing and binding are excellent.

THE PULSE; or, an exposition of the pulse. By the renowned Physician, sage, SANKARA SEN, and the celebrated sage, KANADA. Translated into English from the original Sanskrit by KAPILAJI D. S. SEN GUPTA, 1893. Price one rupee.

This is a little brochure of 166 pages, and will no doubt be welcomed by many Bengali gentlemen, medical and lay, as it is written in a most fascinating, interesting manner, holding the reader's attention from start to finish. As a specimen of curious Sanskrit lore if nothing else, it is well worth possessing. Each translation is preceded by the Sanskrit quotation (in Bengali characters), which it purports to explain and amplify. Dr. S. GUPTA has performed his task with energy, zeal and an accuracy of English diction and idiom which stamp him out as a scholar of no mean attainments.

He says in his *avant-propos* "the perfection to which the ancient Hindus had carried this important branch of the healing art, (*viz.*, a knowledge of the pulse as indicating health and disease), is marvellous. The Hindu physician, by noting the condition of a patient's pulse, can predict the day—say, the very hour when he shall expire—whether he will be cured or not, and other things of a like nature (!) The accuracy with which predictions of death are made seems to confirm one in the opinion that this item of knowledge could not be attained by any other means than *clairvoyance*; unsound as it may appear to the positive intellect of Europe."

A quotation or two, illustrative of the quaint nature of the book will not be amiss.

"If a person's pulse courses like a black-bee, he will die in a day." (!) "He, whose pulse leaves its locality by half a grain of barley, will expire within three days." (!)

"When a person imbibes a sweet flavour, his pulse, courses like a peacock. (!) When he takes anything acid, being slightly heated, it courses like a frog" (!)

Air, Bile and Phlegm are the three great Humours of the body, hence "if the pulse of a person heated with the burning of fever and having his three Humours vitiated, appears ice-cold, then he will expire after three days." (!) And so on.

Such is the ancient medical lore as propounded by the great sage-physicians, SANKARA SEN and KANADA. Let him who runneth, read and reflect.

THE CITY OF GLASGOW LIFE ASSURANCE COMPANY. *Report by the Directors.*

We have before us the fifty-sixth annual report of this most excellent life assurance company, which has branches in Edinburgh, London, Manchester, Calcutta and Bombay, the head office being in Glasgow. The Bengal branch is located at 5, Lyons Range, in Calcutta, the Secretary being Mr. COLIN C. GULLILAND, and the Agents, Messrs. BARRY & Co.

The above Company is in a most sound and flourishing condition, and is making steady progress year by year. During the past year the large addition of 283,205 was made to the Invested Funds, (amounting to \$1,098,181) and a dividend of 9 shillings per share, (free of income tax)

was declared. The whole of the Funds belonging to the Company are absolutely secure. The working capital of management, &c., being very low.

Claims are paid immediately on proof of death or survivorship, and title.

Bonuses are added to policies every fifth year, and after more than 5 years' full premiums have been paid. Intermediate bonuses are given about fourth year between the periods of Division. The Company transacts all classes of Assurance business, and rates, or any other information desired, may be had on application, at any of the Company's offices.

We would heartily commend this most secure and reliable Company to our readers.

THE DROITWICH BRINE BATHS, as therapeutic agents in various diseases. By W. H. TOMLINS, L.R.C.P. (Lond.), M.B.S., (Eng.) (London: H. K. LEWIS, 136, Gower St., W. C.) 1895. Pages 22. Price one rupee.

BALNEO-THERAPY is a method of treatment though fairly largely employed, not favored with much belief as to its efficacy in the cure of disease, simply, we venture to suggest, because not carried out in a thorough, systematic, and scientific manner. But the day of a more scientific treatment of the subject of baths and water-cures has already dawned.

DROITWICH as a health-resort undoubtedly holds its own, and of late years, such vast improvements have taken place in the sanitation of the town, that settlers have flocked into it in large numbers, and a new town practically, has arisen from the ashes of the old one.

The little pamphlet treats of:—(1) The action of baths on the temperature of the body and the heat store; (2) Operation of baths on change of tissue and excretion; (3) Influence of baths on the circulation; (4) on the nervous system; (5) Electrical operations of baths; (6) Mechanical action of baths; (7) The absorption in a bath. Next in order, saline waters are taken up, and lastly, cold springs and hot springs.

Thus the subject of baths as therapeutic agents, is well threshed out in the 22 pages Dr. TOMLINS has devoted to them.

Some of the diseases in which these baths are efficacious are:—muscular rheumatism (lumbago), gout, rheumatoid arthritis, struma, malaria, paralysis, and stiffness of joints after dislocations or sprains, &c.

Government Medical Gazettes.

GOVERNMENT OF INDIA.

The services of Surgn.-Capt. H. W. Elphick, M.B., I. M. S. (Beng.), which were placed temporarily at disposal of Govt. of N.W. P. and Oudh, are placed permanently at disposal of that Govt. from 1st April.

The services of Surgn.-Maj. R. E. H. Whitwell, M.B., C.M., I. M. S. (Beng.), are placed at disposal of Govt. of Beng.

The services of Surgn.-Capt. H. E. Frazer-Brackman, F.R.C.S., I. M. S. (Beng.), are replaced at disposal of Govt. of N.W. P. and Oudh.

The appts. of Surgn.-Cols. J. H. Newson, M.D., and J. C. G. Oatlethill, M.D., in administrative grade of I. M. S., Beng. Branch, will reckon from 1st March and 1st May respectively.

Benares Medical College, admitted into service as Asst. Surg. on 8th April.

Dispositions of Ben. Hosp. Asst. Shauk Amir Bakshi, M.D. Shauk, attached to H. E. Govt. Genl's Disp., are placed on deputation at disposal of Govt. of India, Foreign Dept.

INDIAL GOVERNMENT.

Asst. Surg. Purna Chander Parkait, of Mysore Disp., held med. charge of civil station of Mysore in addition to his own duties, from 21st March to 10th April during absence, on deputation, of Surgn.-Capt. J. T. Oliver, to conduct annual exam. of students of Daoca Med. School.

Asst. Surg. Dina Nath Sanyal, of Jessore Disp., held med. charge of civil station of Jessore, in addition to his own duties, from 20th March to 11th April, during absence, on deputation, of Surgn.-Maj. A. E. B. Stephens, to conduct annual exam. of students of Daoca Med. School.

Surgn.-Capt. W. J. Buchanan, Off. Supdt., Bhagalpur Central Jail, held med. charge of civil station of Bhagalpur in addition to his own duties, from 25th March to 2nd April, during absence, on deputation, of Surgn.-Maj. R. H. Whitwell.

Asst. Surg. Norendra Nath Gupta is apptd. temply. to have med. charge of civil station of Malda from 8th April.

Surgn.-Capt. C. E. M. Green, Civil Surgn. of Maunbhum, has been granted by Her Majesty's Secy. of State for India six months' leave (m. c.) in extension of furlough sanctioned 10th July 1894.

Surgn. Lieut.-Col. R. L. Dutt, Off. Profr. of Materia Medica and Clinical Medicine, Med. Coll., Calcutta, and ex-officio Second Physician, Coll. Hosp., apptd. to act, during absence, on leave of Surgn. Lieut.-Col. J. F. P. McConnell, or until further orders, as Med. Insp. of Emigrants (Inland Emigration), in addition to his own duties, from 8th May.

Asst. Surg. Ganes Chandra Mitra apptd. to superny. duty at Med. Coll. Hosp. until further orders.

Asst. Surgn. Dino Nath Mitter, 1st Demonstrator of Anatomy, Campbell Med. School and Hosp., apptd. to act in addition to his own duties as Teacher of Materia Medica in that institution during absence, on leave, of Asst. Surgn. Mohendra Nath Gupta.

Asst. Surgn. Kali Nath Banerjee apptd. to superny. duty at Med. Coll. Hosp.

The services of Surgn.-Major R. B. H. Whitwell, M.B., O.M., L.M.S. (Beng.) are placed at disposal of Govt. of Bengal.

Surgn. Lieut.-Col. F. B. Swaine, Civil Surgn. of Lohardaga, allowed priv. leave for two months and twenty-eight days from 10th July.

Surgn.-Lieut. L. Rogers, Regimental Med. Offr. at Doranda, apptd. to act, in addition, to his own duties, as Civil Surgn. of Lohardaga, during absence on priv. leave of Surgn. Lieut.-Col. F. B. Swaine.

The services of Surgn.-Major E. F. H. Dobson are replaced at disposal of Govt. of India, Home Dept. from date on which he was relieved of his duties as Off. Protector of Emigrants and Supdt. of Emigration, Calcutta.

Asst. Surgn. Ganga Govinda Sarkar apptd. temply. to have med. charge of civil station of Nankhai, during absence, on deputation, of Dr. C. Banks, or until further orders.

PUNJAB GOVERNMENT.

Asst. Surgn. Mool Chand made over charge of duties of Supdt. of Mooltan Dist. Jail to Surgn.-Capt. H. M. Morris on 1st May.

On being relieved of charge of Sitta Disp., Hissar Dist., Asst. Surgn. Nasir Hussain was placed on genl. duty at that Disp. from 16th to 24th July.

On return from special duty with the Bazaar Delimitation Commission, 1st class Hosp. Asst. Jowala Sahai resumed charge of the Bikaner Dist., on 2nd May, relieving 1st class Hosp. Asst. Gharan Bessal.

Asst. Surgn. Giridhar Lal, Shahpur Disp., has obtained twenty-one days' priv. leave from 6th May.

On being relieved from Benares, Asst. Surgn. Paraschandra Das, Benares Dist., was apptd. to do genl. duty at Civil Hosp., Benares, from 6th May.

Asst. Surgn. Hira Lal, from Bhagalpur Disp., was apptd. to the Civil Hosp., Delhi, which he joined on 8th May, relieving Asst. Surgn. Ram Narain, I, who reverted to his administrative appt. as Asst. to Civil Surgn., Delhi, from that date.

On return from the priv. leave granted to him, 1st class Hosp. Asst. Harman Singh resumed charge of Jalalpur Disp., Gujrat Dist., on 1st May, relieving 2nd class Hosp. Asst. Sachet Singh, apptd. to do genl. duty at Gujrat.

Third class Hosp. Asst. Mangal Sain, from Umballa to Sural Sikha Disp., Mooltan Dist., which he joined on 6th May, relieving 1st class Hosp. Asst. Wadhwa Das.

Surgn.-Maj. A. W. Mackenzie, M.B., and Sibia, was nominated to med. charge of Waziristan Deputation Comm., and held charge of these duties from 4th Nov. 1904 to 10th Feb. 1895.

The following med. pupils of Lahore Med. School, having passed their final exam., are admitted into service of Govt. as Hosp. Assts. of 3rd class, from the 17th April 1895, and apptd. to do genl. duty at Mayo Hosp., Lahore:—Har Bhagwan Das, Ganesh Datta, Ganesh Das, Thandee Ram, Mul Singh, Isa Charan, Bell Ram, Abdul Bahman Khan, Hari Chand, Moti Ram.

The following Hosp. Assts., at present doing genl. duty at Mayo Hosp., Lahore, having passed English qualification exam., are entitled to the higher rate of pay of their grade from 12th May:—Harbhagwan Das, Ganesh Das, Thandee Ram.

Third class Hosp. Asst. Dasaundi Khan, at present attached to Kulachi Disp., Dera Ismail Khan Dist., having passed English qualification exam., is entitled to higher rate of pay of his grade from 10th May.

Second grade Asst. Surgn. Khazan Chand, Punjab Prov. Estab., having passed septennial professional exam. of Asst. Surgns., held on 6th May, is promoted to 1st grade from 1st May.

Third grade Asst. Surgns. J. D. Bebeiro and Mehta Davi Dial, Punjab Prov. Estab., having passed septennial professional exam. of Asst. Surgns., held on the 6th May, are promoted to 2nd grade from 1st May.

Second class Hosp. Asst. Nohsan Ali, Punjab Prov. Estab., having passed septennial professional exam. of Hosp. Assts., held on 16th April, is promoted to 1st class from that date.

The following Hosp. Assts. of Punjab Provl. Estab., of 2nd class, having passed septennial professional exam. of Hosp. Assts., held on 15th April, are promoted to 2nd class:—Wajid Ali Shah, Sharif Hussain, Fattah Mohammed, Ghassita Mal, Ganda Ram, Fazl Kerim, Narain Das, 15th April.

Asst. Surgn. Ralia Singh, doing genl. duty at Mooltan, to Kasur Disp., Lahore Dist., which he joined on 13th May, relieving Asst. Surgn. Sobha Ram.

Asst. Surgn. Sobha Ram from Kasur Disp., Lahore Dist., to the Jullundur Civil Hosp., which he joined on 16th May, relieving Asst. Surgn. Bhagwan Das II.

Asst. Surgn. Bhagwan Das II., from Jullundur Civil Hosp., to Rawalpindi Civil Hosp., which he joined on 17th May, relieving Asst. Surgn. Jhangli Ram.

Asst. Surgn. Jhangli Ram, from Civil Hosp., Rawalpindi, to Hairo Disp., Rawalpindi Dist., which he joined on 18th May, relieving Asst. Surgn. Harman Das, Imperial List, apptd. to do genl. duty at Rawalpindi from 26th May.

First class Hosp. Asst. Sawan Mal, Phillour Disp., obtained priv. leave from 2nd to 11th May, during which period 1st class Hosp. Asst. Bhehen Das, Phillour Police School Hosp., held charge of Phillour Disp., in addition to his own duties.

Surgn.-Maj. J. Shearer, M.B., assumed charge of civil med. duties of Kohat Dist. on 16th May, relieving Surgn.-Maj. H. J. K. Bamfield.

MADRAS GOVERNMENT.

Surgn. Lieut.-Col. William O'Hara to be Dist. Med. and Sany. Offr., Trichinopoly, in succession to Surgn.-Col. F. H. Blenkinsop.

Surgn. Lieut.-Col. James Anderson Esling, M.B., to be Dist. Med. and Sany. Offr. and Supdt. of J. B. Railway, from 2nd June, date of expiration of tenure of the present appt. as Sany. Commr.

Surgn. Lieut.-Col. Walter Graham King, M.B., D.F.H., to be Sany. Commr., Madras, in succession to Surgn. Lieut.-Col. J. A. Laing, vacated.

Surgn.-Maj. U. M. Thompson, M.B., Dist. Med. and Sany. Offr., Tanjore, is granted fifteen days' priv. leave from date of departure.

Brig.-Surgn. Lieut.-Col. H. J. Hazlett, priv. leave for two months and thirteen days.

Surgn. Lieut.-Col. H. Allison, furlough (s.a.), one year from 1st June.

Surgn.-Maj. J. L. VanGeysel, priv. leave for three months, from 3rd July.

Surgn.-Capt. Robert Robertson, M.B., C.M., to act as Chemical Examr., during absence of Surgn.-Maj. J. L. VanGeysel on leave.

Surgn.-Maj. Kavasji Curesoji Sanjana to be Dist. Med. and Sany. Offr., Pinnevely, in succession to Surgn. Lieut.-Col. H. Hyde, from 25th May.

Surgn.-Maj. William Alexander Lee to be Dist. Med. and Sany. Offr., South Arcot, and Supdt. of Jail, Cuddalore.

Surgn.-Capt. Henry Thomson, M.B., to be Dist. Med. and Sany. Offr., South Canara, and Supdt. of Jail, Mangalore.

Surgn.-Capt. Charles Donovan, M.D., to act as Dist. Med. and Sany. Offr., South Canara, and Supdt. of Jail Mangalore, during absence of Surgn.-Capt. H. Thomson on leave.

BOMBAY GOVERNMENT.

Asst. Surgn. Navroji Kavasji Kalyanvala, L.M. & S., was placed on genl. duty for two days, viz., 20th and 21st March.

H. E. Governor in Council is pleased to appt. Surgn.-Maj. J. P. Barry, M.B., to act as Civil Surgn., Kaira, in addition to his own duties.

H. E. Governor in Council is pleased to make the following appts. during absence of Brig.-Surgn. Lieut.-Col. G. A. Maconachie, M.D., C.M.

Surgn. Maj. W. K. Hatch, M.B., C.M. F.R.C.S. to act as Principal, Grant Med. Coll., in addition to his own duties.

Surgn. Capt. H. Herbert, F.R.C.S., to act as Profr. of Ophthalmic Medicine and Surgery and Profr. of Comparative Anatomy and Zoology, Grant Med. Coll.

Asst. Surgn. Sorabji Fardunji Ghandhi, L.M. & S., is promoted from 3rd to 2nd class of Asst. Surgns. from 12th April.

Brig.-Surgn. Lieut. Col. G. A. Maconachie, M.D., C.M., is allowed furlough to Europe (w.a.) for one year.

Surgn. Capt. H. Herbert, F.R.C.S., to act as Ophthalmic Surgn. Jamahedji Jijibhai Hosp., during absence of Brig.-Surgn.-Lieut. Col. G. A. Maconachie.

Asst. Surgn. J. E. Bocarro to act as Civil Surgn., Kaira, vice Surgn.-Capt. Herbert.

CENTRAL PROVINCES GOVERNMENT.

Third class Civil Hosp. Asst. Chithamburam Pillay, employed as Vety. Inspr. in Central Provs., has been exempted from septennial exam. prescribed for Hosp. Assts., and promoted to 2nd class from 1st April 1891.

Second class Civil Hosp. Asst. Sohan Lal, whose services are no longer required with No. 14 Survey Party, is directed to do duty under orders of Civil Surgn., Hoohangabad.

Second class Civil Hosp. Asst. Nanak Parshad, doing duty under orders of Civil Surgn., Pachmarhi, is directed to do duty under orders of Civil Surgn., Nimar, at Burhanpur Dispy.

Second class Civil Hosp. Asst. Ujagar Parshad, doing duty under orders of Civil Surgn., Wardha, is posted to Jail Hosp., Sambalpur.

On being relieved by Civil Hosp. Asst. Ujagar Parshad, 3rd class Civil Hosp. Asst. Govind Deo Rao, attached to Jail Hosp., Sambalpur, is posted to Police Hosp., Raipur.

On being relieved by Civil Hosp. Asst. Govind Deo Rao, Native Dr. Sheodeen, attached to Police Hosp., Raipur, is permitted to retire from service.

Third class 2nd Civil Hosp. Asst. Devendranath Bannurji, attached to Haveli Bungal Dispy., Nagpur, is directed to do duty under orders of Civil Surgn., Wardha.

Six months' leave (w.a.) is granted to 1st class Civil Hosp. Asst. Saadat Hussain, attached to Jail and Police Hosp., Wardhappur.

Second class Civil Hosp. Asst. Sohan Lal, doing duty under orders of Civil Surgn., Hoohangabad, is temporarily posted to Jail and Police Hosp., Wardhappur, during absence (w.a.) of Civil Hosp. Asst. Saadat Hussain.

First class Civil Hosp. Asst. Jamaluddin, attached to Kharad Branch Dispy., Saugor Dist., placed under suspension from 1st May.

Third class Civil Hosp. Asst. Laxman Kesho, doing duty under orders of Civil Surgn., Saugor, temporarily apptd. to Chural Branch Dispy., Saugor Dist., from 1st May.

On being relieved by 3rd class Civil Hosp. Asst. Kunj Bahari Lal on return from leave, 2nd class Civil Hosp. Asst. Ram Sahai, temporarily attached to the Sakoli Branch Dispy., apptd. to Tirora Branch Dispy., in Bhandara Dist.

On being relieved by Civil Hosp. Asst. Ram Sahai, 3rd class Civil Hosp. Asst. Abdululla Bhai, attached to Tirora Branch Dispy., Bhandara Dist., directed to do duty under orders of Civil Surgn., Nagpur.

Three months' priv. leave granted to 1st class Civil Hosp. Asst. Kabil Ahmad, attached to No. 9 Survey Party, from 1st June.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Capt. H. W. Elphick, Offg. Civil Surgn., to be Civil Surgn. 2nd class, with grade station Baharanpur, vice Surgn.-Maj. P. J. Fryer, promoted, and to continue to office as Supdt., Central Prison, Allahabad, from the 1st April.

The services of Surgn.-Capt. H. B. Melville, Offg. Civil Surgn. Azamgarh, are placed at disposal of Govt. of India, Home Dept.

Surgn.-Maj. W. Deane, late Civil Surgn., Moradabad, was on priv. leave from 21st April to 7th May.

Surgn.-Maj. G. M. J. Giles, Offg. Civil Surgn., Bijnor, priv. leave for three months from 4th June.

Asst. Surgn. Lalita Prasad, in charge of Sadr Dispy., Bijnor, to hold charge of civil med. duties of Bijnor Dist., in addition to his own duties.

Surgn.-Capt. L. G. Fischer, Civil Surgn., Moradabad, to hold visiting med. charge of Bijnor Dist. in addition to his own duties.

Surgn.-Maj. J. F. MacLaren, Civil Surgn., Ghazipur, to hold visiting med. charge of Ballia Dist. in addition to his own duties.

Surgn.-Lieut. W. Young, M.B., C.M. I. M. S. (Beng.), whose services have been placed temply. at disposal of this Govt. by Govt. of India, Home Dept., to office as Civil Surgn. 2nd class, and to be posted to Budaun Dist.

Milly. Asst. Surgn. E. P. Clement, whose services have been placed at disposal of this Govt., to civil med. charge of Hardoi Dist. from 28th April.

BURMA GOVERNMENT.

Second grade Hosp. Asst. Tatia Khundoojee relinquished charge of Civil Dispy., Mogaung, Myitkyina Dist. on 14th April, and assumed charge of Civil Dispy., Wakema, Myaungmya Dist., on 28th April.

Second grade Hosp. Asst. Sandhe Khan relinquished charge of Police Hosp., Myitkyina, on 2nd April, and assumed charge of Police Hosp., Mogaung, Myitkyina Dist., on 14th April.

Second Grade Hosp. Asst. Sandhe Khan assumed, as additional duty, charge of Civil Dispy., Mogaung.

Third grade Local Asst. Surgn. Maung Pha Taw, on availing himself of leave without allowances for two years, relinquished charge of the Genl. Hosp., Rangoon, on 8th May.

Third grade Local Asst. Surgn. Maung Thiri, on completion of his promotion exam., assumed charge of Genl. Hosp., Rangoon, on 9th May.

First grade Hosp. Asst. Abbas Ali, on return from leave, assumed charge of Civil Hosp., Pegu, on 6th May.

First grade Hosp. Asst. Abbas Ali assumed, as an additional duty, charge of Lockup, Pegu, on 9th May, vice 2nd grade Hosp. Asst. Shaik Salamat Ali.

First grade Hosp. Asst. Pandit Nathu Ram relinquished charge of Contag. Dis. Hosp., Rangoon, on 12th April, and assumed charge of Police Hosp., Myitkyina, on same date.

Second grade Hosp. Asst. Jaganath Singh relinquished, as an additional duty, charge of Jail Hosp., Minbu, on 20th April.

Second grade Hosp. Asst. Jugendra Nath Bhattacharji, on availing himself of three months' priv. leave, relinquished charge of Contag. Dis. Hosp., Rangoon, on 7th May.

Second grade Hosp. Asst. Shaik Salamat Ali, on transfer to Zigon, Tharrawaddy Dist., relinquished charge of Civil Hosp., Pegu, on 9th May.

Second grade Hosp. Asst. Khurbaruddin, on return from cholera duty, assumed charge of Genl. Hosp., Rangoon, on 9th May.

Third grade Hosp. Asst. Gajum Singh relinquished charge of Outpost Hosp., Twingyi, Ruby Mines Dist., on 28th Dec. 1894, and assumed charge of Outpost Hosp., Tagaung, Ruby Mines Dist., on 29th Dec. 1894.

Third grade Hosp. Asst. Blasuddin relinquished charge of Police Hosp., Myitkyina, on 15th April, and assumed charge of Outpost Hosp., Sima, Myitkyina Dist., 19th April.

Third grade Hosp. Asst. Mahomed Husain relinquished charge of Outpost Hosp., Myitkyina Dist., on 19th April, and assumed charge of Outpost Hosp., Kazu, Myitkyina Dist., on 21st April.

Third grade Hosp. Asst. Maung Tun U, assumed as an additional duty charge of Jail Hosp., Minbu, on 1st May, vice 2nd grade Hosp. Asst. Anant Singh.

Third grade Hosp. Asst. Shaik Kadir Bax relinquished charge of Genl. Hosp., Rangoon, on 7th May, and assumed charge of Contag. Dis. Hosp., Rangoon, on same date.

First grade Hosp. Asst. V. Chinnaswamy Pillay relinquished as an additional duty charge of Police Hosp., Lashio, Northern Shan States, on 29th April.

First grade Hosp. Asst. Mahomed Amir, being suspended without pay, relinquished charge of Police Hosp., Bhamo, on 28th March, and on release from suspension resumed charge of Police Hosp., Bhamo, on 9th May.

First grade Hosp. Asst. Syed Mahomed Abius Sattar, on availing himself of three months' leave (a.c.), relinquished charge of Civil Disp., Zigon, Tharrawaddy Dist., on 16th May.

Second grade Hosp. Asst. Gulam Mustafa, on return from escort duty, assumed charge of Police Hosp., Lashio, Northern Shan States, on 29th April.

Second grade Hosp. Asst. Pandit Nathu Ram relinquished charge of Police Hosp., Myitkyina, on 30th April.

Surgn.-Maj. George Tucker Thomas, who has completed twenty years' full pay service, to be Surgn. Lieut.-Col., 31st March.

Surgn.-Capt. Arthur Owen Evans, who has completed twelve years' full pay service, to be Surgn.-Maj., 31st March.

Surgn.-Maj. B. E. S. Davis, M.B., made over, and Surgn.-Capt. A. R. P. Russell assumed executive and med. charge of Rangoon Central Jail on 8th May.

G. O. C. C.

The Commander-in-Chief in India is pleased to sanction an exchange of places on Indian roster of service between Surgn.-Maj. E. H. Myles, M.B., and Surgn.-Maj. J. C. Culling, both of the A.M.S.

At a District Court Martial assembled at Rawal Pindt on 27th March, 2nd class Asst. Surgn. Edgar Osborne Johnson, Indian Sanatoriums Med. Dept., was arraigned for disobeying a lawful command, given personally by his superior officer in execution of his duty, and was sentenced to be reduced to the rank next below that of a 2nd class Asst. Surgn. by order of H. E. Commander-in-Chief in India.

ASSAM GOVERNMENT.

Md. Latifullah Feroz Chaudhry, Asst. Surgn., whose services have been placed at disposal of Chief Commr., posted to Naga Hills Dist.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Rs. 1 for subscribers and Rs. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

DESOUZA.—On the 2nd June, at Kichee, the wife of Asst. Surgn. P. N. Desouza of a son.

FORSTH.—On the 6th June, at 4, Elvisham Row, the wife of W. Forstth, F.R.C.S.E., of a daughter.

SMYTH.—On 14th May, at Hillfield, Backpale, Weymouth, the wife of Brig.-Surgn. Lieut.-Col. F. A. Smyth, R. M. Indian Army, of a daughter.

MARRIAGE.

ROBINSON—HARRISON.—On 1st May, at St. Joseph's Church, Cairo, by the Rev. Father Brindie, Catholic to the Forces, assisted by the Rev. J. Coleman, G. S. F., Oliver Edgar Robinson, Surgn.-Capt. A. M. S., son of the late Henry Oliver Robinson, M.I.C.E. to Rose Adela Harrison, eldest surviving daughter of the late Sir Henry Ireland Harrison, B. C. S., and Lady Harrison.

DEATHS.

GUNNING.—On the 1st May, on the voyage from India to England, in H. M. I. T. S. *Malabar* Brig.-Surgn.-Lt.-Col. James Davis Gunning, A.M.S., aged 50 years.

MUNGAVIN.—On 9th June, at Darjeeling, Agnes Nora Wischem, sweet, beloved, eldest daughter of Asst. Surgn. Michael Edmund and Agnes Louisa Mungavin, aged 4 years, 7 months, and 21 days. "Safe in the arms of Jesus."

NOTICES TO CORRESPONDENTS.

HINTS TO CONTRIBUTORS.

1. Write plainly and briefly and to the point. 2. Write on one side of the paper only. 3. Save postage by sending your papers by "Book Post," the wrapper having its sides open. 4. Every member of the Profession in India should do his little share in adding to the general stock of knowledge of tropical disease. 5. Write up interesting cases or a series of cases, give statistics bearing on the history, causation, prevention and treatment of disease. 6. Bear in mind that this Journal is a channel of communication between the members of our profession in the East; therefore send "Personal and General News items," and they will be recorded. 7. Write your views on socio-political topics, connected with the profession, official and non-official, in order to advance the interests of all sections of our country. 8. Newspapers and journals sent for notices should have the parts intended for observation marked.

C. A. T.—We understand that twenty years ago, when living was four times cheaper than it is to-day, an order was passed by the Madras Government that Hospital Assistants could charge a fee of 8 annas by day and one rupee by night for each visit paid to a patient in private practice. Recently, when reference to the Surgeon-General was made regarding Hospital Assistants' fees, this same order was quoted. We think the fee ought rightly now to be raised to Rs. 2 and Rs. 4.

J. W. (Visnagaram).—We have kept out all correspondence relating to Hospital Assistants with a good

C. W. (Calcutta).—It is well known that the European and Eurasian practitioners of Calcutta had a traitor in their camp at the Indian Medical Congress Committee. He was not of their community, but poses as one of their body.

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and others.

THE MENOPAUSE

In this condition, which comes on as slowly as does puberty, and usually lasts for fairly months Dr. BYRON ROBINSON notes that the various phenomena may possibly be explained by a disturbed harmony of visceral rhythm dependant on blood, calorific and perspiratory changes acting through the nervous and circulatory systems; but the etiology and pathology of the menopause lie chiefly in the sympathetic or ganglionic nervous system; for while the systematic pathologic stages are a slow progressive process of atrophy, genital irritation or disease, indigestion, malnutrition and anaemia, the greatest points of disturbance are in the heat, sweat and vasomotor centres, according as their blood supply is deficient, disproportionate or excessive, and women, "at this period of their lives, do not suffer a thousandth as much from malignant diseases, as they do from hysteria, neuralgia, mental deviations and other affections, all pointing to an unbalanced, unstable nervous system, debility of the sympathetic axes, irritability of the cerebro-spinal and ganglionic system or reflex neuroses, in all of which a large blood supply means a vast nerve supply. Premature puberty means well-developed genitals and ganglionic nerves with a more or less highly developed abdominal brain and hypogastric plexus. And while an early or a stormy puberty respectively means a late or a stormy menopause, the disturbance at the beginning of puberty is a profound, actively, reflexly propagated process, which quickly fits the growing and changing nervous system but the menopause is a destructive process which, breaking up the harmony of the previous processes, unleashes nervous energy and circulation, and by stopping the means and causing atrophy of the genitals and hypogastric plexus administers to every viscous a greater shock than it received at puberty. Reflex neuroses point to irritation of a peripheral motor or sensory area, and objective sexual desire at the menopause is indicative of disease. The menopause is characterized by various discharges, such as leucorrhoea, metrorrhagia, epistaxis, pruritus, hemorrhages from the breasts, and the neglect of which may compromise malignant disease, and a malnutrition of the sexual organs which has a tendency to increase and which coincides with the general atrophy of the organism, the loss of weight, thinness, black teeth and perhaps diarrhoea, and the degeneration of the cellular structures are manifested with increased force at which the patient is conscious of the fact, and sometimes even of the nature of the change."

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purpose. His attitude to the officials of their grievances and disabilities is before the Government, and it would be impossible at this stage to thrust forward complaints that might harass those in authority whom we believe are strongly disposed to do justice to this useful class of practitioners.

M. A.—The Collector should pay your account in full. Don't proceed against him in a court of law.

B. M. J. (Jelhera).—Beni Madhab Tiwari, Medical Officer of Jelhera, Bihar, says:—"To all the readers of the Record I have the honor to announce that I have discovered a specific remedy for true Leprosy. I am willing to send a quantity of the medicine, with full directions for its use, to any medical brother who wishes to try it." We would be glad to receive reports of any cases of genuine leprosy treated successfully by our correspondent. Doubtless his offer will result in further trials.

T. O'C. (Buxar).—A lad who has passed the Entrance Examination of an Indian University could not do better than join the Warrant Medical Service, and while in College, attend the full University curriculum.

C. W. (Calcutta).—It is well known that the European and Eurasian practitioners of Calcutta had a traitor in their camp at the Indian Medical Congress Committees. He was not of their community, but poses as one of their body.

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Books.—Health and longevity in the East, by Dr. S. S. Sanyal. By Sankar Chandra Sanyal. Translated from the original Sanskrit by Kaviraj D. S. Sanyal. Price one rupee. M.R.C.S. (Publishers): Messrs. Sampson, Low, Marston & Co., Ltd., London.

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The Dreitelsch Brine Baths as therapeutic agents in various diseases. By W. H. Tomlins, L.R.C.P. (Lond.), M.R.C.S. (Eng.). (Publisher: H. K. Lewis, Ltd., Gower Street, London, W.C., 1896). Price one rupee.

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THE VAGARIES OF NEUROMYTHESIA,
ILLUSTRATED BY THREE CASES.By SURGEON-CAPTAIN PATRICK HEHR, M.D.,
F.R.S.E., F.R.S.S.E., D.P.H. (Cantab).*Lecturer on Pathology and Clinical Medicine, His
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THE multiplicity of morbid phenomena which may be generated by those affected with nervous mimicry is proverbial. And whilst a large number of the cases possess certain characters in common, we occasionally come across cases totally distinct from all ordinary hysterical manifestations. Such was the case in the three following instances of neuromimesia.

1. *Forash Bhi*, female, *æt.* 32 years, Mahomedan, married 12 years, came under observation on the 28th March 1894, suffering from severe dyspnoea, with a "floating tumour" in the abdomen, violent palpitation, and occasional epileptiform convulsive seizures, lasting from a few minutes to half an hour, with great mental excitement, alternating with depression during the intervals.

The history of case is as follows:—About five years ago irregular menstruation began, from which time the symptoms above enumerated commenced. She had been under many *hakims* and physicians, both Unani and others, during that period, and every one appears to have diagnosed the case differently. This is the first time, however, she was placed under the systematic treatment of a European physician. The most varied forms of treatment had necessarily been employed, and when I began giving her valerianates, asafoetida, and other antispasmodics of that class, she at once stated that these had been already given her repeatedly without effect.

For about seven years she was obliged to live apart from her husband, whose occupation, that of Revenue Settlement Officer, necessitated his wandering about the country for several months every year. During that time she used to have constant quarrels with her husband's relations, with whom she dwelt.

Present condition.—The patient is a highly nervous, excitable woman, fairly well proportioned, but now somewhat emaciated; she is exceedingly intelligent, and is able to describe her own symptoms and sensations with clearness and accuracy. I saw her for the first time when she was suffering from an attack of the dyspnoea mentioned above.

It was not a breathlessness for want of air, but a curious abrupt stoppage of inspiration, similar to what one finds in pleurisy. In addition to this, after every four or five respirations the left half of the diaphragm would contract suddenly, and give rise to a stabbing or shooting pain, which she stated, began in the abdomen on the left side, and passed up through the chest to the left shoulder, and would then disappear till the next contraction began. She stated that she had also the sensation of the presence of a ball which would rise from about the position of the umbilicus and proceed upwards, but remain in the chest about

the middle of the sternum, and appear to compress the structures in the upper part of the thoracic cavity. She explains that before the epistaltic waves come up, this ball ascends to the throat and threatens to suffocate her, and that at that moment she becomes senseless.

There is a peculiar soft swelling in the infra-scapular regions on the left side, which is highly elastic, red on the surface, and painless, and appears to be in the subcutaneous structures. Examination of the chest reveals nothing abnormal as regards the lungs, but the heart's action is excitable (120 per minute). There is dilatation of the left ventricle, but all the sounds are clear and distinct. There is loss of sensation on the left side of the body, but this alternates with hyperæsthesia. BROWN-SQUARED'S phenomenon of metalo-therapeutic pressure over the left ovary, sets up the greatest distress, ending in the production of an hysterio-epileptic attack. There is what appears to be a floating left kidney in the abdomen, the position of which may be altered by palpation from the left iliac fossa to the left hypochondrium. This organ is excessively sensitive. The patient states that she has suffered from dyspepsia "all her life," but that it gets much worse every fortnight or so. Her bowels are very irregular, but usually constipated; sometimes she goes two or three days without passing an evacuation. One of the most peculiar features of the case is that she voids urine only once a day, every morning on getting up, when from 10 to 15 ounces are discharged. This urine is of high specific gravity (1085), high color, and contains an abundance of oxalic acid crystals, but no albumen or sugar.

The temperature is normal, but she had an attack of ague about a week ago, and has been subject to recurrence of the quotidian form of this fever for years.

This first examination of the patient appeared to exhaust her considerably, and I was obliged to relinquish it, before a complete investigation was made.

The liver functions are normal. The skin is now dry, but she states that once or oftener every day she sweats profusely on the left side, and that she is almost always obliged to lie on the back, because lying on either side gives her great pain and distress.

The attitude adopted by the relations was one of great anxiety and solicitude on the patient's account, which they made no attempt at disguising. Indeed the husband would every few minutes during my visit yield to bursts of overwhelming grief, which the relations, including his wife, in turn, would attempt to appease, but he, like his wife, would appear to be inconsolable. This lasting a few minutes, the wife would chime in, then the relations, the *lost ensemble* of this small tragedy, forming the most ridiculous scene conceivable. The cause of the perpetuation of the patient's state became at once evident, and the line of treatment to be followed, equally apparent.

I requested the relations to send for me at once when an attack of hysterio-epilepsy manifested itself, which they did the next evening. On entering, I found the patient stretched out in the crucifixion attitude, lying obliquely across the bed, quite unconscious, the body arched and resting on the occiput and sacrum, occiput boring the pillow. The hands were clenched, toes and legs turned inwards, the eyeballs turned upwards and

inwards, but after a while regular nystagmus followed. The patient bit the tongue in several places, and in the early part of the struggle for breath, tore open her jacket. There could be no doubt but that the attack was genuine and the patient's state serious, but by no means dangerous.

She believed herself to be completely paralysed, and that she could not move from the recumbent posture, which she had now retained for the last five months. There was thus, apparently, to those who did not understand her state, abundant cause for alarm. Although we attempted to reason with the husband and relations that the patient would get well, they looked incredulous. The only condition I imposed was that they should do exactly as I advised.

I laid considerable emphasis on the necessity of her removal to a strange place, and that all her relations, except the husband, be relinquished for the time being. It took many days to induce them to do this; but, at last believing the case to one requiring desperate measures, they permitted her removal. In the meantime, I was soon able to gain the husband's confidence; and being an intelligent man, he readily recognised the theory of the treatment. I had also partly acquired the patient's confidence, although it was evident that there was a lingering suspicion in her mind as to what was to take place, and that she had only a very partial belief in my treatment; for, as she expressed it, "if all our Unani *hakims* have failed, how is it possible for you to cure me?" Eventually results proved the reverse, and as she was improving rapidly, she was eventually satisfied that she could be cured, and this came about in a very curious way related below.

After observing the phenomena of this first fit of hystero-epilepsy, I saw that active agents would be necessary, and we dosed her with enormous quantities of three remedies—mixed bromides, nitro-glycerine and apomorphine.

She never had another real attack of hystero-epilepsy. I asked them to always send for me when an attack came on, and as they had brought the patient to within 100 yards of my quarters, I was able to get there at once. On the third day after the attack just described, I was hurriedly sent for, and on seeing her it was at once evident that the "fit" was a false alarm—that the patient was "acting" a fit for her relations' delectation. I said so (in her hearing), and uttered a great many severe things, whilst I was preparing (in her presence) a galvanic battery with which to electrify her. I also sent for a large *ghurrah* of water, but before either of these were ready, the patient relaxed her efforts, which had been very vigorous. This "fit" lasted 28 minutes. I explained to those around that this was only a very minor fit, when they said: "How can it be so? Feel how she is sweating, and see how flushed her face is!" I said to her husband, "you use your dumb bells for half an hour continuously and see if you will not be in the same state. This applied to their reason, and curiously enough, to the patient's also, who seeing that "the game was up," never created another attack of this kind.

The patient continued to pass water once a day only, and the curious sporadic condition of the left side of the diaphragm went on without interruption.

I could not make out what the swelling over the back was, nor do I know to this moment, whether it may have been a localised vasomotor paresis, with a certain amount of infiltration of serum and white cells. That it was not a curious condition was shewn by its entire disappearance. This swelling relieved, the spasm of the left half of diaphragm; the dyspnoea, &c., would have led one to surmise that a diaphragmatic pleurisy with effusion, or even an empyema had developed, but there was no pyrexia, nor any physical signs of effusion, and all the other indications of pleural or pulmonary disease were absent.

The strangest part of this is that the swelling behind, like the unilateral spasm of the diaphragm, entirely disappeared and re-appeared in the most fickle way, but not by any means always. One was forced to believe it to be unilateral spasm of the left half of the diaphragm. With each contraction of the diaphragm there was a peculiar noise, which was heard best on the left side of the chest wall in front, but which was altogether unlike hiccup; the physical signs of diaphragmatic pleurisy and pyrexia were absent. As a matter of fact, we can conceive such a curious state occurring only in a case of neuromyositis.

Regarding the micturition once a day only, (and that every morning at 10 o'clock, when only about 10 to 15 ounces passed) we apprehend that some deception or trickery, similar to that which these patients have been known to perpetrate in connection with the production of the so-called "paradoxical pyrexias" by friction of the bulb of the thermometer placed in one of the axillae. I had the patient carefully watched, but no such deception regarding this peculiar phenomenon was discovered. She could also produce (apparently at will), the most extensive localised swellings all over the abdomen, so that until one had become acquainted with the very high degree of neuromyositis present, one marvelled at the hypertrophy of liver to-day which was gone to-morrow, the same condition of the spleen next day, or an enormous dilatation of the stomach, and so on, all equally evanescent. Indeed, she could develop abdominal tumours at will in almost in any position.

I omitted to mention above that there was perpetual nausea and anorexia, but on two occasions only was there actual vomiting. There was comparatively little cough. Being a *goolia* woman, she would not allow me to examine the chest properly, but when they thought danger to be present, permitted a complete examination. I noticed then that there was a most peculiar swelling over the left breast also. It was circular, 6 inches in diameter, and 1½ inches deep, had a soft semi-fluctuating feel, elastic, and pulsating, but the latter was probably due to the diffuse undulating impulses of the dilated left heart and possibly due, as the other one, to local vasomotor paralysis, with perhaps a small amount of oedema from the turgescence.

The thyroid gland was not enlarged, nor was there any uterine disorder. As previously remarked, Brown-Sequard's metallo-therapeutic phenomenon was well illustrated. It would throw her into a peculiar cataleptic state, from which a whiff of amyl nitrite resuscitated her.

The great value of preparations of valerian and acafatida, nitroglycerine solution, bromides, and anti-spasmodics generally, all shewed a well marked hysterical element.

2. The second case presented symptoms almost as peculiar as those of the first, but in this instance the patient would lapse into a true cataleptic condition after a prolonged and well-marked fit of hystero-epilepsy. This history is interesting.

M. B., a Mahomedan lady, began to suffer from these attacks about seven months ago, and has had five in all. The first occurred two days after an accident. She fell in the dark from the basement of her house, which was three feet in height. Except a little bruising of the right lip, no injury was sustained. She was, however, as in case No. 1, alternately depressed and agitated during these two days, and indulged in out-bursts of crying every now and then, which culminated in the convulsive seizure above named. This attack and the three following were designated "hysterical fits," and in the main, this term indicated the predominating factor in the case. We, however, depreciate the use of such terms by scientific medical men, especially in the hearing of non-professional people. If an appellation has to be given to such conditions to satisfy either the relations or the patient, we much prefer that of "nervous mummery," the literal meaning of the term *neuromyrmia*. Highly irritable or nervous women amongst Europeans would not make the subject of "nervous mummery" one to be talked about, sympathised with, or boasted of, whilst they will entertain no such reluctance in making the subject of "hysteria" one of conversation, when that term has been employed in the diagnosis, although both conditions are, of course, identical. Hence the influence of even the name given to a disease in the case of females who suffer from this unstable condition of nervous tension. We see practically the same thing in the analogue of *neuromyrmia* in the male, viz., *hypochondriasis*.

We saw this second patient for the first time during the fifth attack. She had been ill for three days, and various remedies had been employed in the treatment. When we saw her, she was rigidly stretched out in the crucifixion attitude, the neck arched, the hands forming clenched, the face pale, the pulse small and frequent. The breathing was somewhat shallow, but every few minutes she would take a long deep inspiration. The attacks would last about 20 minutes, and after every one of them she would lapse into a cataleptic condition, sometimes with the eyes fairly closed, at others, immovably fixed on the ceiling. Here also there was a peculiarity in regard to the urinary discharge. Whilst the attack lasted, she would not void urine more than twice a day, and then only in small quantities; but as soon as it passed off, she would discharge no less than 8 pints a day of the usual neuromymetic character, pale, limpid, of low specific gravity, with a relatively small amount of urea, but absolutely, considerably larger than in health.

In this case the pulse instead of becoming weaker as the attack was prolonged, it became harder, and although nitrites of sodium or nitroglycerine or a few whiffs of nitrite of amyl would relax the tension, this effect was transient, and whilst it lasted, the heart would be thrown into the most violent palpitation. The patient remained in this state for 36 hours, after I took over charge of her case. The whole phenomena ceased abruptly, whilst we were giving her the usual dose of five minims of nitrite of amyl on a handkerchief. Suddenly she appeared to wake up out

of a long sleep with a sort of start; she appeared considerably prostrated, but spoke rationally, asked to see her two children, took some stimulant mixture and chicken broth, and then lapsed into a sleep which lasted from 5 P.M. to 4 A.M., gradually returning to health.

The third case is also that of a Mahomedan married woman, who is the mother of three children, the last being four years old. When before her marriage, she suffered almost monthly from dysmenorrhoea and scantiness of discharge. The history briefly is—

3. M. M., *act.* 22 years, has been married 5 years, but joined her husband only about 2 years ago.

This case was one of a very unfortunate character, being the only child of doting parents, she had acquired a very violent temper which they early did not check. The temper used to last from 24 to 72 hours, and at the end of this time she would lapse into the neuromymetic state. Her temper was exaggerated by various domestic circumstances into which we need not here enter.

The convulsive seizures began with violent attacks of epileptiform convulsions, during which the patient was semiconscious. The attacks were intentional, and during the intervals she would be possessed of destructive tendencies, especially in the presence of her husband.*

It was quite evident that this was a perfectly different case to the two preceding ones, and required a different line of treatment altogether. The patient could control the seizures, as a rule, and whenever it suited her morbid imagination she would develop an attack for the delectation and anxiety of her relations. This became evident very early in the management of the case, and although the line of treatment adopted was for a long time only tolerated by her relations, I was able to convince them eventually by two complete demonstrations, that the patient was only playing with their sympathies and wanting to arouse their anxiety. I do not make these statements with the view to shewing that there is any vice in these neuromymetisms—far from it. Their sufferings are as real to them as are those of the most severe cases of tetanus, or "Jacksonian (partial) epilepsy." My special object is to shew that a great deal of discrimination and much experience are needed to understand these cases thoroughly, and that no routine system of treatment can be adopted. In two of the three cases quoted above, "harsh measures" were required, as a rule; but even in these two there were times when such means would create an attack. In the other, a calumniate and re-assuring line of treatment was required, whilst in the case of *neuromyrmia*, alluded to in the foot-note, anything approaching severity or harshness would not only have been barbarously cruel, but would have lost for the physician the patient's and the relations' confidence, by pointing to the fact that he did not comprehend the nature of the highly complex and morbid state of mental and bodily functions under which the patient was suffering.

* It was my intention to have contributed another exceedingly interesting case, in which there was apparently suspended animation for several consecutive hours, whilst the pulse would disappear from the wrist, and the first sound at the apex become almost inaudible, followed at the end of that time by Cheyne-Stokes respiration, the onset of which was always a sign of return to consciousness. There are many other very strange factors connected with that case, but the notes regarding it are with my friend, Dr. MIRZA KAHIM KHAN, Inspector of Diapentasis of His Highness the Nizam's Domains, who is on tour. We hope in a future issue to supplement the present paper with the particulars of that case also, which in every respect appears to us to be one of the most interesting instances of "suspended animation," so called, that has been recorded in recent times, whilst there was distinct response to the conjunctival reflex; there was also nystargism, another curious feature of the case.

REPORT OF SURGICAL OPERATIONS PERFORMED AND MEDICAL WORK DONE DURING 1894-95 IN THE JUNAGADH STATE HOSPITAL.

By T. M. SHAH,

Chief Medical Officer, Junagadh.

THE SURGICAL OPERATIONS performed during the past year in all institutes of the State were 2,855—358 being major and 2,497 minor. Most of the major operations have been performed at the Junagadh Hospital.

The prevalent diseases of the year were:—malarial fevers, diarrhoea, dysentery, eye diseases, nervous affections, bronchitis, injuries, intestinal worms, rheumatic affections, diseases of the urinary system, and of the cellulo-cutaneous and cutaneous systems.

A summary of a few interesting cases treated at this hospital is subjoined:—

Cataracts.—101 patients were admitted for cataract and 144 cataract extractions were performed, of which 115 were successful and 27 unsuccessful; 2 patients absented.

Out of the 144 extractions, 79 were on the right eye and 65 on the left eye.

Of the 99 patients operated upon, 68 were males, 29 females, and 2 children.

I have noticed in a few instances that cataract ripens and vision is reduced to mere perception of light, further changes then take place and vision improves and the patient is able to discern large objects and can count fingers. This is very likely due to the liquefaction of the cortex.

Children in the same family getting cataract after fever attacks.—MOHAN KHANDAR, aged 5 years, has both eyes cataractous since the last 18 months, after an attack of continued fever for 6 days.

22nd April 1894.—Chloroform administered, incisions were made in the cornea, and soft lenticular matter withdrawn, some capsular opacity persisted in the left eye. Discharged with fair vision.

II. JIVI KRIMDAS is the sister of the above-mentioned patient. Sight of both eyes began to be impaired 4 years ago after an attack of fever.

Left cataract has matured, (right eye not so), by which she is able to see from the inner margin of the pupil, and is able to go out.

23rd April 1894.—Linear operation performed on the left eye, iris excised and the semi-solid lens removed; some capsular opacity persisted; discharged with fairly good vision.

On 20th February 1895.—Linear extraction performed on the right eye after maturation of cataract; capsular cataract formed, but has good vision through a perforation in the capsule.

III. DULEHA UDESHANKER, set. 7 years. Infantile cataract of both eyes with marked nystagmus.

8th July.—Linear operation performed on both eyes; capsular opacity persisted; vision did not materially improve.

Glaucoma.—Numerous cases of glaucoma, both among males and females, are noticed among out-patients. Most

of them are cases of the complete form, beyond the reach of remedy. Many are of a chronic variety, which are inamenable to treatment. Few cases are fit for iridectomy, and they are not very satisfactory in their results.

Trichiasis.—Thirty-three cases as in-patients and several others as out-patients were treated, most of whom were women. Cooking together with frequent weeping for the dead, renders them more liable to trichiasis than men. For every man there are 6 women suffering from this distressing disease. Some patients resort for treatment early, while others turn up only when the cornea has lost all its transparency. In elderly women and widows, the ciliary edges are scalped, in young and married women, ABEL'S operation is attended with satisfactory results.

Hypertrophy of conjunctiva.—A lad, FOOLCHAND, aged 20 years, suffered from hyperplasia of conjunctival tissue. His upper eyelid drooped and the ocular and palpebral conjunctivae were very much thickened; conjunctivae were excised before he was relieved.

Urinary calculi.—Eighty-two cases were admitted; 2 absented and 80 were operated upon; 2 were urethral and 78 vesical stones. Among the 80, 43 were males, 2 females, 35 children. Among the 78 vesical stones, 62 litholapaxy, 7 perineal litholapaxy, and 9 lithotomy operations were performed. Of the 62 litholapaxies, 58 recovered and 4 died; all the lithotomy cases recovered. Among the 62 litholapaxy cases, 24 were male children and 1 female child. The ages of the children varied from 2 to 12 years, their average age being 5 years, and they all recovered. There were 37 males of whom 4 died and 33 recovered. Of the 7 perineal litholapaxies, 5 were children and 2 males, of whom 1 died and 6 recovered. Of the 9 lithotomy cases, 3 were males, 1 female and 5 children.

Lithotomies and perineal litholapaxies were performed only when for some reason regular litholapaxy was inadmissible.

Of the 2 urethral stone cases, 1 was a male and the other a female child. In the male, a small stone was lodged within the glans penis and was scooped out.

Urethral stone retention and extravasation of urine.—A child 4 years of age had a stone impacted in the prostatic portion of the urethra; for three days retention and extravasation of urine took place. On 17th February 1895 incisions were made over the hypogastrium, penis and scrotum, a catheter passed and urine withdrawn. The stone could not be dislodged either forward or backward, a staff was therefore passed, and the stone was thought to be pushed back into the bladder, which was then opened through the perineum, but the stone was not found in it. It remained in the urethra. It was then forcibly extracted per meatus urinarius. The perineal wound served as a direct passage for the urine, and the wounds over the hypogastrium, penis and scrotum, strange to say, healed up very rapidly, no tissues sloughing. The child was discharged cured on the 25th.

Among the 5 fatal cases of vesical calculi were:—I. VELA JIRAN, aged 18 years, a very unfavorable case. He was extremely emaciated, face was careworn with retching, there was disinclination for food, the urine was very ammoniacal, fetid and loaded with pus; the stone filled almost the entire vesical cavity; it was extremely hard,

white and marble-like in appearance, more than 2 inches in diameter. The blades of the lithotrite could not lock together without being hammered and as the lithotrite could not be freely manipulated on account of the size of the stone and contraction of the bladder, an opening was made through the perineum and the stone removed piecemeal. The total number of fragments collected, weighed 1,382 grains. The operation was performed on the 8th July 1894, and the patient died of exhaustion on the 11th.

On *post-mortem* the bladder was found contracted and hypertrophied. Both ureters were dilated and the kidneys degenerated.

II. DEOSHI MALA, aged 20 years, had a phosphatic stone in the bladder of 5 years' duration; urine strongly ammoniacal and loaded with albumen and mucus; stone was lodged in the neck of the bladder which appeared to be divided into two compartments. The stone was crushed on the 24th June 1894. Patient gradually sank and died on the 29th. His temperature not rising above 100°.

III. SAJAN ARJAN DHED, aged 50 years, had vesical calculus for 3 years. Stone was crushed on 1st March 1894, and the debris removed, weighed 274 grains. Patient died on the 8rd. On *post-mortem* examination the bladder was found to be sacculated and ruptured.

IV. KALA RAJA, aged 30, suffered from stone symptoms for 18 months. Litholapaxy performed on 29th August 1894; 13 drams of chloroform consumed. Hard stone, $\frac{1}{2}$ inch in diameter, crushed and 592 grains of debris removed. He died of peritonitis on the 30th.

V. NARAN RAMO, aged 40 years, vesical calculus of 2 years' standing. Stone was $1\frac{1}{2}$ inch in diameter, crushed on the 6th September 1894. While aspirating, the debris greatly blocked up the canula with fragments; it was withdrawn, cleared, and re-introduced. It missed the bladder; and the aspirator failed to bring out debris. Bladder was therefore opened from the perineum in order to afford free vent to urine and avert infiltration. However, peritonitis supervened and patient died on the 8th.

Thus of the 5 deaths among adults, 2 were due to rupture of bladder, and 3 to unfavorable conditions of the bladder and general ill health.

Interesting stone cases: sacculated condition of bladder.—MAVJI NARSI, aged 10, was subjected to stone operation. Lithotrite No. 5 was introduced but could not work well, as the stone seemed to be in the anterior cavity. Perineal incision was made, and on introducing the finger, the stone was found in one cavity and there was another smooth-lined cavity below and over the rectum.

This feeling of a sac or another cavity was also experienced in the case of SIMO HAGO, aged 12, who was operated on the 15th June 1894.

High temperatures no bar to stone operation.—RUBO RAM, aged 8½ years, had stone in the bladder and suffered fever on admission in March 1894. Temperature rose to 102° to 104° in the evening, but his father was bent upon having the stone removed at once. Litholapaxy was therefore performed on the 16th and the child discharged on the 22nd, quite well.

Recurring stone.—NATHA MULA was admitted for recurring stone on 8th May 1893. Stone was removed by

perineal incision after crushing it into fragments with a lithotrite, as this small instrument that was passed per meatus could not crush it. On 4th May 1894, a recurring soft phosphatic stone was crushed and debris aspirated; bladder was chronically diseased. Discharged well on 15th.

Adherent stone.—JIVA GOVA, aged 80 years, suffered from stone which was adherent to the anterior wall of the bladder. Lithotrite could not therefore crush it completely. Perineal incision was made and the attached portion was detached by means of the finger and was then removed by forceps.

Fragment of stone undetected.—MUSA VELA, aged 60 years, was subjected to litholapaxy on 28th October 1894, and the operation completed under the belief that the bladder was emptied of all fragments, but the patient continued to complain of painful micturition, and on 9th November, on examining the bladder, a fragment about $\frac{1}{2}$ inch in diameter was, strange to say, detected; it was then crushed and removed.

Stone perforating anterior wall of vagina.—RANI MULA, aged 40 years, was operated on 10th January 1895 for a recurrent stone. Litholapaxy was performed upon her 3 years ago; the stone could not be seized by a lithotrite, as it appeared to be adherent. On vaginal examination a spiculum of stone projected from the posterior wall of bladder just in front of the cervix; it was pushed back into the bladder and removed piece-meal per urethram.

Stricture of urethra.—Eight cases of urethral stricture were treated, 5 of them were by gradual dilatation with catheter and 3 by operation.

I. In one case the urethral orifice was contracted in the stump of an amputated penis. In this instance the urethra was dissected out and left out in the perineum.

II. In the case of UMAR, WHEELHOUSE's operation was performed for resilient stricture, and a rubber catheter was retained in the urethral passage.

III. MULIBHAI, aged 20, suffered from traumatic stricture of the prostatic portion of the urethra. This stricture was impermeable. After a fall on the perineum 3 years ago, he got the stricture with incontinence of urine. The urine keeps constantly dribbling away without any distension of bladder.

This combination of impermeable traumatic stricture, with incontinence is very unique and rare. WHEELHOUSE's operation was performed and a rubber catheter retained in the bladder. Patient is still in hospital, stricture is relieved, and the incontinence has disappeared.

In one case, viz. that of AHMEDSHA, male 45 years, a perineal incision was made for chronic cystitis and rest afforded to the bladder. The urine was voided per perineal wound for several days and the patient was discharged well within a fortnight.

Seven cases of diabetes were treated mostly with codeia and opium. One patient, JAGOO, had administered daily, one pancreas with a little salt and black pepper for several days, but without any visible benefit.

Piles.—Two cases of bleeding piles were treated with injection of carbolic acid with very satisfactory results:—

I. KHASOZ, a young man, suffered from bleeding piles and prolapsus ani. He suffered from excessive bleeding,

and was very pale and debilitated. Four injections of carbolic acid into different piles relieved him of all symptoms, and his general health improved considerably.

II. POPAT D, a prisoner suffering from excessive bleeding piles. He had enlarged spleen, anæmia and general oedema of the body. His state of health was such that he could not get up or walk without dyspnoea.

Any operative measure was out of question. On examining the rectum two small piles were observed lying immediately above the verge of the anus; both were injected with carbolic acid. From that very day they ceased to bleed.

Prolapse of the anus and rectum, with or without bleeding, were treated (with marked benefit) by the injection of nitrate of silver into the rectum.

Elephantiasis Arabum.—GAGO MULA, aged 10 years, suffered from an elephantoid growth of the prepuce, scrotum and left lower limb. He had intermittent attacks of fever, together with inflammation of the above-mentioned parts. The penis was buried within the elongated prepuce, which was excised on 4th June. The scrotal skin was somewhat thickened and was studded over with miliary elevations. Irrespective of the inflammatory affection, fluid dribbled from the scrotum, and was at first mistaken for urinary fistula, but on careful examination, the fluid was found to be serum.

II. KRISHNAJI SHANKARAJI, aged 45, suffered from an elephantoid growth of the right leg and left forearm for 3 years. He had no inflammatory attacks of fever. Both the patients were treated for a period of about 2 months with the administration of cow's urine, sodii sulphocarbolis, juice of "Piludi," (night-shade, a native diuretic and cathartic) and the succulent aloe leaf without any benefit.

Spontaneous gangrene.—KANJI MANJI, aged 25 years, admitted 13th August 1894 with spontaneous gangrene of the left great toe; the soft parts had dropped off and the dead bone was projecting. Adjoining portion of the foot was swollen and painful. The distal portion of the right index finger had been mortifying for one year but dropped off a month ago. The great toe, 2nd and 3rd toes of the right foot mortified after a slight injury, 4 years ago.

15th September 1894.—Patient has been in hospital more than a month. His temperature varies daily between 98° in the morning and 101°·8 in the evening. He is losing flesh, has had prescribed quinine and tonics, poultice and dressing being applied locally, without any benefit. On the other hand, the gangrenous ulcer is spreading over the dorsum of the foot, the first metatarsal is exposed and all the remaining four toes have ulcerated at their base. Pulse at the left wrist and axilla is fairly well marked, but there is no pulse at the right wrist, and a very faint one at the right axilla. Pulsations in both femorals well marked.

The patient had been suffering from this dry and slow gangrene since the last seventeen months, and also losing ground by constant fever; and as there was no line of demarcation, SYME'S operation was performed on 17th September 1894. On removal of the foot, there was no bleeding and no vessels could be discerned; the tourniquet on the thigh was gradually loosened, and at last totally removed, without a single vessel spurting. A short while after, there appeared some oozing, but the vessels were secured, and

sutures and dressings applied. The subsequent progress was very tardy and unsatisfactory. The healed flap died and an abscess formed on the lower part of the leg. Temperature fluctuated between 99° and 100°, at last the stump cicatrized completely, and the patient was discharged cured, on the 29th November 1894. The vessels of the affected foot were degenerated and occluded, and therefore gave rise to the gangrene.

II. DOBA DAVOD, aged 50, admitted on the 8th June 1894 with gangrene of the terminal phalanges of the middle and index fingers of the left hand. He was treated with tonics and ordinary dressings; the healed tissues gradually separated, and he was discharged cured.

JUMASHA KHASADIA, aged 40, a beggar, received a prick from a thorn 4 years ago, which was followed by gangrene of the great toe of the right foot, which gradually increased and SYME'S operation was performed; he was sent home well.

The great toe of the left foot became gangrenous after a slight injury; it was removed with its tarsal bone two years back and he was discharged cured. Lately he was admitted for gangrene of the second toe of the left foot. His general health is fairly good, but he is liable to gangrenous inflammation on the slightest injury.

(To be continued.)

NASA FEVER.

BY LAWRENCE FERNANDEZ, M.D., L.R.C.P. & S.
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(Continued from page 364, Vol. VIII.)

Pathology.—There is a congestion of the mucous membrane of the nose and frontal sinuses. The mucous membrane is slightly raised, but there is no inflammation. Following the congestion there is slight catarrh. Often on pressure there is a doughy feeling, but suppuration never occurs. There is no tissue change in the mucous membrane, which, however, assumes an hypertrophied appearance after repeated attacks. The blood which escapes consequent on a method of treatment commonly practised, (detailed below) and which gives immediate relief, is of a darkish color and poor in plasma. Examination under the microscope of the blood shews an increase in the number of colorless corpuscles, the red bodies presenting a crenated appearance.

Treatment.—Quinine and arsenic have no effect on the disease. Opium relieves the pain in the neck, back, etc. Tartar emetic in doses to induce diaphoresis has not with good results, and I know of one case where both local and internal treatment failed to give relief, in which this drug was of the greatest service. A brisk saline purgative is all that is needed in the simpler cases. The usual method of treatment, and that which gives the most relief, is depletion, which is done either by (1) (as the natives do it), two bundles of *dhoo* grass introduced into the nostrils, over which friction and outside pressure are applied against the septum; (2) by a few pricks of a needle; or (3) by a few punctures with a bleeding lancet. A small quantity of blood escapes and the sufferer is restored in a few hours, to perfect health. This plan of treatment,

however, is only palliative, and the great objection to it is, that if frequently done, it induces an hypertrophied condition of the mucous membrane, but which has no effect in lessening the efficiency of similar treatment in future. Very often it is not safe to follow this plan, for although it is generally followed by relief, and by a subsidence of the accompanying fever, yet in some instances the congestion, with all its train of symptoms, recurs. The local application of astringents, such as a solution of tannic acid, or a 10 per cent. watery solution of cocaine, has given good results in the hands of many practitioners. The application of *akanda* juice (*Calotropis Gigantea*) to the mucous membrane also gives relief. The febrile symptoms must be treated according to indications.

The plan of treatment I have adopted in cases which have come under my notice, of a few Europeans, and a number of Natives, is as follows:—A brisk purgative, injection of cold water, cold affusion (injection of iced water up the nostrils), two or three times a day, with diaphoretics internally.

This line of treatment has invariably given me good results. Fever and nasal affection passing off within three or four days. In a few instances, however, high fever followed the subsidence of the congestion, and even delirium in one case.

Conclusion.—Such is the brief history of a disease which, as I have said, although very common in this province, has not yet received a place in medical literature. That it is well known to practitioners of this country there is no doubt. The *kobirajes* and *hakims* know all about it, and they apparently have been quite conversant with its existence for many hundred years. In one of the oldest Tantras there is found detailed, in a discourse on fevers by SIVA, explaining the same to his wife PARVATI, as follows:—

PARVATI says:—"Oh MAHADEVA! thou perceiver of past, present, and future, Oh thou merciful God of gods! thou who knowest all, tell me all about fevers; Oh! for the benefit of men tell me."

SIVA: "Oh, DEVI! hear the different forms of fever. A knowledge of them makes an adept physician—Fever is divided into two varieties: (1) that which begins with rigor; and (2) that which begins with heat. These again are divided into four, where they terminate by collapse and delirium. These four varieties are sub-divided into twelve other forms produced by impurities of mucus, bile, and phlegm."

"That which begins with cold (rigor) is divided into non-eruptive and eruptive fevers.

"The non-eruptives are periodics:—Daily, quotidian, tertian, and quartan agues.

"The eruptives are:—The typhoid, the plague, *nasha jashar*, and the epidemic of small-pox.

SIVA continuing says:—"Oh DEVI! *Nasha jashar* shews itself at the nostrils, they become occluded, the pulse becomes irregular (like the leaps of a frog), temperature increases, there is severe headache, soreness of the eyes, constipation, dysuria, and delirium. The mouth palate, throat, and lips are dry; there is a running from the nostrils, pain in the back, flanks, and abdomen.

After 15 days the severity subsides, but the first three days are the worst through which the patient passes when the disease reaches its crisis, and the patient either passes into convalescence or the disease ends fatally."

Again, in the *Ayur Veda* it is stated, that "*nasha jashar* originates from disorder of the bile in a phlegmatic constitution. The swelling in the nose is like the flake of an onion, and it appears either in one or both nostrils. It is always attended with more or less fever, and pain all over the body, especially in the nape of the neck and forehead. Scarification is the treatment."

THE VALUE OF APOMORPHIA AS AN ANTISPASMODIC.

BY EDWARD BALM,

District Surgeon, Parbhari, Hyderabad.

APOMORPHIA was introduced in the Afzulgunj Hospital, Hyderabad, by DR. LAWRIE in the treatment of tetanus on the suggestion of DR. BOMFORD of Calcutta. DR. LAWRIE used to administer it in doses of $\frac{1}{16}$ to $\frac{1}{4}$ grain hypodermically twice or three times a day, and the results were not disappointing.

Last year, when I took charge of this hospital, I had a unique and distressing case of hiccup in a man 50 years old. He suffered from it for about 6 months, and the acts numbered 30 to 40 per minute. He had been a well-built man, but was reduced to a skeleton, and the sight of food was most loathsome to him. He tried a lot of native medicines without any relief, and my predecessor prescribed for him almost all the drugs of the pharmacopoeia without the slightest good. I subsequently tried atropia, morphine by the mouth and subcutaneously, bromide of potassium, camphor, chloroform, emetics, mustard plaster over the region of the diaphragm, and a host of others without the least good.

I then thought that as hiccup is a symptom caused by a spasm of the diaphragm, I have evidently a spasmodic disease to deal with, I therefore gave him $\frac{1}{4}$ grain of apomorphia dissolved in 107 parts of water hypodermically. In less than 3 minutes the symptom subsided, and in 5 minutes more, he vomited. He was not troubled with the symptom for two days, but the third day he came again to hospital with it—it was less troublesome than before. I gave him $\frac{1}{4}$ grain of apomorphia more, hypodermically. The symptom subsided in about the same time, and there was retching and vomiting the whole day, but the hiccup never recurred.

I was not able to find out the cause beyond that he was a great smoker of tobacco.

Hiccup as a minor symptom, is familiar to all. Whenever I get it, I generally take a long breath and "hold it in," repeating this at frequent intervals, (so as to cause a regular and uniform pressure on the spasmodic diaphragm,) with excellent results. It would be interesting to know if this simple remedy has been tried by anybody before.

I have also tried apomorphia in a very bad case of hysteria, in a young woman, that defied every other treatment, also in cases of asthma, and in all these instances it afforded temporary relief.

THE RADICAL CURE OF HERNIA INGUINALIS PERFORMED AT THE PONDICHERRY HOSPITAL.*

BY HENRY GALLAY,

Surgeon-Major for the Colonies.

SINCE the last two years that we have been in charge of the medical service at Pondicherry, we have performed in the hospital 36 times, the radical cure of hernia inguinalis.

Number.—The number of operated cases is only 36, because twice we have had to operate on hernia of the two sides in the same man.

The operations have been done 31 times on the right side and 7 times on the left.

Complications.—Twelve times our hernia cases have been found complicated and our surgical operations aggravated owing to the necessity of having to perform in the same meeting: Twice the amputation of a cancerous osticle; twice the radical cure of old hematoceles; eight times the radical cure of old and voluminous hydroceles; twice adhesions of the intestine with the hernia sac. It was impossible to extirpate these adhesions, and we were obliged to reduce the intestine and the sac from which. It was impossible to separate it. Three times we have noticed that the cecum came down into the scrotum. Once the cecum was accompanied by the upper part of the colon and by a lump of epiploic fringe abnormally swelled; the lump weighed nearly 4 lbs. Another time we saw the cecum and the ileo-caecal appendiculum ruptured on the left side. Again on another occasion we found the hernia sac adhering to a greasy tissue 3 inches in thickness. Thus out of 36 operations, 18 were complicated, or 50 percent.

Failures.—Notwithstanding the above disadvantages we had but 4 fatal cases, that is 10½ per cent., which average is far from approaching that of the last statistics of BARKER, BASSINI or of LUCAS—CHAMPIONNIER, and still less the mortality obtained by other surgeons.

The cases of death have been:—

One by tetanus.—(The local hospital where we operate has formerly been the hearth of tetanus).

During the last year, although we have carried out upwards of 300 surgical operations, it was the first time that terrible infection occurred, and perhaps we would have as much right in accusing the tissues of our patient as the locality where we operate. The man was a farmer living in contact with the soil; perhaps the assistant in charge of the antiseptics had not sufficiently disinfected the surgery field.

On one occasion the hernia sac was doubled into a sort of wen from which it was impossible to extricate it, it was strangled by two pieces of catgut crossing each other and was then reduced; the thickness of the greasy tissue was no doubt such that a small artery was insufficiently strangled. A little stickiness was formed on the right side of the iliac pit, the hernia was then on the left, fever set in, and the patient succumbed after presenting the symptoms of peritonitis. When the corpse was opened, it was noticed that the neck of the sac, which was on the left side, had shifted after its reduction, to the right, and that,

around it, a little hemorrhage had taken place, which served as the starting point of the peritonitis.

The third case of death was due to prolonged suppuration: we had, on the same patient who was (infant and old, performed on the same day the radical cure for hernia inguinalis of the right side and an old hydrocele of the left. There was no serious accident on the side of the hernia.

On the side of the hydrocele, there was a collection of fluid in the lower part of the scrotum. The wound cicatrized by first intention, we were therefore surprised to find at the inferior and posterior part of the cords a large piece of tissue gangrenized, and the elimination of the slough caused a suppuration of long duration from which the patient succumbed on the 17th day of the operation.

The fourth and last case was that of an old man in whose scrotum we found not only the cecum, but the greater part of the large intestine with 4 lbs. of epiploic fringe abnormally swelled. The reduction of this mass of large intestine was very painful. Everything seemed to have taken place normally. In the evening, 12 hours after the operation, the patient was well. In the night, however, the stomach swelled with extreme rapidity and he succumbed to the symptoms of asphyxia, before we could be sent for.

The opening of the dead body was not permitted. I always thought that the reduced intestine, instead of being stretched out, must have rolled itself up, and that the loss of our patient must be imputed to strangulation by torsion.

As we have finished relating our failures, we will now proceed with our successes.

Successes.—Twelve times we have obtained the ideal result, that is to say, union by first intention, ablation of the sutures on the 8th day, complete cure on the 15th. By precaution the patients were kept in bed until the 30th day, when they left the hospital.

Twenty times the cicatrization has been delayed either because sometimes the sutures have cut the flesh; or because a little liquid had accumulated under the superficial sutures which it was necessary to allow to fill up the cavity which was formed for that purpose.

In two cases, we found the cord of the testicle swelled, with profound suppuration.

The operated cases kept in the hospital generally 45 days. Two stayed 48 days, and only two left on the 53rd day.

Therapeutic results.—Authors are willing to admit that relapses after the operations for hernia occur before the sixth month.

We have met 14 of our operated patients, whose surgical actions dated:—

| | | |
|---------------------|-----|------------|
| 29th December 1892 | ... | 21 months. |
| 25th August 1893 | ... | 13 " |
| 17th September 1893 | ... | 12 " |
| 6th November 1893 | ... | 10 " |
| 10th " | ... | 10 " |
| 24th " | ... | 10 " |

* A paper read before the Indian Medical Congress and sent to the Record for publication.

| | |
|-------------------|----------|
| 1st December 1893 | 9 months |
| 17th " | 9 " |
| 20th " | 9 " |
| 29th January 1894 | 7 " |
| 12th February " | 7 " |
| 23rd April 1894 | 6 " |
| 25th " | 6 " |

Among all, the recovery has kept up perfectly well.

Among all, the scar is soft, and the cord inguinalis free from adhesion.

And what makes the whole of these results interesting is that :

Among the operated patients, one happened to be an old weak looking man, sixty-one years of age, and with whom the cure of an ancient large-sized hernia has been completed by the excision of a cancerous testicle.

Having regained his plumpness and alertness, this old man, formerly an impotent, walks now easily since about two years.

The next were four sepoys, who after one month's rest, have, the first since thirteen months, the two others since ten months, resumed their military duties and bear all the hardships entailed.

There were three police peons of whom one patient was operated on the 20th December while he was a scholar ; he left the hospital to enlist himself as a sepoy, and since ten months is well enough to perform the military gymnastics and other exercises, and bears without difficulty the painful period of the young soldier's instruction.

Two were Europeans : one was a Doctor on board a steamer, he has since six months resumed his duty on board, and goes up and down the ladder, supports the necessary muscular efforts to struggle against the rolling and pitching, and that without wearing a truss.

The other one is a sort of vagabond, having lost all self-consideration, operated more than ten months ago for a hernia, which was about the size of a grown-up person's head. He again commenced his old existence of rower, living on the roads, wandering on foot from Cuddalore to Pondicherry, even extending his begging trips to Trichinopoly, without being tired or threatened with relapse.

Method employed.—In all cases, I made use of Bassini's process, which, as every Surgeon knows, consists in the reconstitution, by means of two whips of catgut, of the partitions of the channel inguinalis, in their full length, while the deep orifice of the channel retains just the width sufficient for the inguinalis cord to pass through.

Conclusions.—The therapeutic method I have just mentioned gives to the reconstituted abdominal partition perfect stability, allows the inguinalis channel to be free to let the cord pass through, and by shutting the deep opening of this channel, prevents all possibility of a relapse.

The busy and tiring existence which since the operation, our two European subjects, our four sepoys, three police peons and the young recruit have led, all confirm the conclusions which BASSINI himself, when publishing his surgical method, thus formulated ; viz :—

That, as soon as successfully operated for an inguinal hernia, when the reconstitution of the partition of the channel has been methodically made, the patient may be considered completely cured, he can go through the most trying profession, and no longer bear any bodily defect, on account of which he is usually rejected from the military profession, or exempted from the military service.

A MIRACLE OF PLACIDITY.

TEMPORARY LOCAL ANÆSTHESIA FROM HYDRATE OF CHLORAL.

By SURGEON-CAPTAIN PATRICK HENIR, M.D.,

F.R.S.E., F.R.C.S.E., D.P.M. (Camb.)

Lecturer on Pathology and Clinical Medicine,
His Highness the Nizam's Medical
School, Hyderabad.

WHEN chloral hydrate is taken continuously as a soporific for some days, it is well known that it is likely to be followed by a localised paralysis of sensibility, but such a result may follow upon a single dose ; and sometimes from a comparatively small dose.

During the last five weeks, three such cases have come under my observation. The first, a Hindoo male, *et.* 40 years, was suffering from a severe nervous shock, followed by insomnia. After two nights and days of complete sleeplessness, I was asked to prescribe for him. I gave 30 grains of bromide of potassium, combined with 20 of sulphonal, to be repeated every two hours, until sleep was induced. During the night he took 150 grains of the former, and 100 of the latter, without any effect, except a little drowsiness, which came on the next morning, and continued throughout the day. The same was repeated during the next, (that is, the fourth) night without producing even drowsiness. He had taken, therefore, 300 grains of bromide and 200 of sulphonal. On the fifth day, I prescribed 30-grain doses of chloral hydrate to be repeated every half hour, until sleep was produced, in the same way as we give the drug for rigidity of the *os uteri* during the first stage of labor. Three doses were ordered. The third dose had the desired effect of causing a sound normal sleep of seven hours. The next morning on waking, he found that the whole area supplied by the sensory fibres of the musculo-spiral nerve of both sides were paralysed. I was somewhat alarmed at this result, considering the large quantity of hypnotics he had consumed in the preceding three nights. The next night no sleeping draught was administered, and the sensibility of the parts returned, but he had no sleep. On the 7th night we again repeated the chloral with the same effect, although he had only taken two doses of 25 grains each, but the area of skin supplied by the ulnar nerves alone was anæsthetised. This wore off at about 4 P.M., and from that day the patient would not take any more hypnotics.

T. A. N., a stalwart man, in the enjoyment of sound health, was suddenly attacked with acute bronchitis of a severe type, followed by symptoms of bronchial asthma. The fits of coughing were purely spasmodic, and very violent, with no expectoration. I prescribed 15-grain doses of iodide of potassium with various expectorants and antispasmodics, but these failed to produce any decided effect on the violence of the cough. It became necessary to administer opiates. These also failed, and 8-grain doses of chloral hydrate were prescribed. The chloral successfully lessened the severity of the attacks of coughing, but the second dose produced a peculiar numbness of the whole of the outer aspect of the right foot and leg, and the outer part of the

cutaneous area supplied by the sensory spinal nerve. All possible points of compression of the nerve implicated were inquired into with negative results. My experience led me at once to recognise the cause and the evanescent nature of the affection. The chloral was continued for two days, when the occasion for it no longer existed. On discontinuing the drug the patient recovered complete sensation in the part that was anaesthetised.

H. G. an adult male Eurasian, was suffering from an ordinary attack of "ardent" or "sun fever"—an intensified form of febricula, with a tendency to hyperpyrexia; the temperature oscillating between 103° and 105°·5 for several days, and was unable to sleep at night. Urethane, sulphonal, bromidia, and hyoscyanina had been tried in vain; and nothing had the desired effect, till a 25-grain dose of chloral was given. The next day he complained a peculiar numbness of the lower half of the right side of the face, which lasted for about five hours, after waking in the morning. The same occurred the next morning; the dose of chloral hydrate having been repeated during the night previous, and similarly disappeared during the day. It did not recur after the third day's dose. Not one of these cases was affected by loss of motor power over the implicated sensory area, nor was any one of them affected in any way; in all the anaesthesia was localised and temporary.

A PECULIAR CASE OF POISONING.

By Asst. Surgn. B. E. GHARVALA, F.C.S. (Lond.) L.M.S.
First Assistant Chemical Analyser to the Government of Bombay.

A SUBORDINATE JUDGE of Bijapur, a Brahmin by caste, aged about 42 years, was taken ill with fever of about three days' duration. He was reported "as having been fairly well on the afternoon of 18th April. At or about 5 P.M. he received a dose of medicine from a native quack; he soon afterwards complained of burning pain in the stomach, suffered from incessant vomiting and purging, and died about 10 P.M. on the 18th of April." This is the history of the case as supplied to the Chemical Analyser to the Government of Bombay. On analysis arsenic was detected in the viscera. Subsequent to the receipt of the viscera, two solid heavy dark brown masses of the consistence of stone were forwarded. These two masses were called "Hemgarbh Matra" and "Samarpang Matra," and presented the appearance of having been rubbed on some stone or hard substance. On analysis one of them was found to contain mercury and sulphur, and presented some minute particles of glistening material, which was supposed to represent gold, said by the quack to be one of the constituents of the "matra." The other "matra" was found to contain arsenic and sulphur. The medicines which the quack employed consisted of a few grains from both these celebrated compositions—"compounds, the composition of which is kept a profound secret and handed down from father to son, through several generations—a compound which in the present instance was the means of cutting short, a bright, promising and useful career. There is no doubt that the death of the sub-judge was due to the administration of these compounds, for it is admitted that he took ill with all the

symptoms of arsenical poisoning; soon after they had been administered to him, and that arsenic was found in the viscera, and its presence identified in the "matra." I cannot do better than close this article with the warning given by the Chemical Analyser to the Government of Bombay in his last annual report:—

"It is hardly necessary to remark that the possession of one of these "matras" places enormous power in the hands of the owner—a power which can very readily be employed in an unscrupulous manner, and even when used with the best of motives by a skilled person as a *bona fide* medicine, it is practically impossible in a crude preparation of this nature, to form any idea of the quantity of each ingredient present in any given dose, as it must necessarily vary in different parts of the same matra."

A CASE OF PHELGMASIA DOLENS OF THE ARM.

By JOHN MORTON, M.D.,
Mussorie.

A LADY, III para, was confined easily on the 18th instant. Nothing untoward happened till the third day, when the temperature suddenly rose to 104° and excruciating pain was felt in the left shoulder, the inner side of the arm and the flexor aspect of the forearm. Hypodermic injections of morphia were given, but only relieved pain for a couple of hours after their administration. The day after the commencement of the pain, the arm began to swell, and on the third day the whole of the upper limb was characteristically swollen. The temperature kept high for fully a week, and then showed some signs of becoming normal. The uterine discharge during the course of the disease was erratic; for a day it would be profuse and then for another 48 hours it would almost border on stopping entirely. The uterus was kept well disinfected with antiseptics, and all the details of antiseptic midwifery were carried out. The moment therefore of infection must have been when the patient was confined, the labor was very quick and the husband received the child in his hand, before I or the nurse could arrive. The arm has been treated in the orthodox way, by absolute rest, hot fomentations, and anodyne applications. It is almost well now. I think phlegmasia dolens attacking the arm is very rare, and therefore send these notes for publication.

A CASE OF SNAKE-BITE TREATED WITH STRYCHNINE INJECTIONS.

By A. FERMIE, L.R.C.P. & S. Edin.,
Civil Medical Officer, Garo Hills.

GANDRANGE GARO, a strong active man, employed as dak runner, about 25 years of age, was at 7 P.M. on the 15th ultimo bitten on the dorsal aspect of the right foot by a snake some 2½ feet long, of a dark-brown color, beautifully marked with square dark spots. I did not see the snake, but by the aid of diagrams, and the description, I take it to have been a *Trimerurus Monticola*.

The man was brought in to me at 7-45 P.M. There were the marks of two small punctures about one-fourth of an inch apart, from which was oozing a few drops of blood. He had a cloth tied tightly round the leg. His pupils were slightly dilated, the right a little more so than the

left; his pulse was small, thready and rather compressible. He complained of great pain and nausea.

I enlarged the wound and encouraged bleeding, then I injected 10mg. of a 1 gr. strength strychnine tabloid, and in another twenty minutes a second tabloid of like strength. At 8-30 P.M. the man said he was suffering great pain and felt drowsy, when I injected once more, and this time 8m. of the liquor strychninae B. P. About 9-15 P.M. he said he was feeling somewhat better, though he felt some pain and a stinging sensation about the region of the bite and injections. I then washed out the wound with Condy's fluid and kept him in hospital, taking off the ligature round his leg at the same time. The next morning I saw him again when he was able to hobble along with the aid of a stick; though his foot was somewhat swollen. During the two days he remained in hospital he improved greatly, at the end of which time I dismissed him, and in the course of four days more, or six days after the bite, he was able to resume his usual calling, that of dāk runner.

I may state, in conclusion, that the question arises whether the snake was poisonous. The symptoms and prostration of strength seem to point to the existence of poison; though it is possible that this particular snake may not have been so effectual as to kill or destroy a vigorous adult life.

STRYCHNINE IN NICOTINE POISONING.

By AGIA RAM,

Civil Hospital Assistant, Murren.

I was called to see a patient, aged 22 years, who was in a semi-comatose state, presenting the following symptoms:—Sensation completely lost and mind wandering and quite unconscious. On being requested he protruded the tongue. Pulse 105 per minute, temperature between 101°—102°, extremities cold and clammy, body in cold perspiration, respiration quick and difficult; and at times he complained of pain over the right nipple. When I enquired the cause of this calamity, his wife told me that "he had been working three days continuously in a tobacco field, turning the leaves of tobacco &c. Yesterday evening he came home and asked for a smoke. I prepared the smoking pipe and gave it to him. He smoked for about half an hour and then fell ill." I enquired of the wife whether he was in the habit of smoking. Her answer was in the negative, but said he had commenced only two weeks ago. I suspected that the patient was suffering from tobacco poisoning, and I accordingly gave him a mustard bath, some inhalation of spirit ammoniac aromatic, and about 2½ minims of liquor strychnine hypodermically. He regained consciousness in about half an hour after the first dose, every sensation returned, and he was apparently all right, and asked for something to eat. He was given about ½ seer of milk with a little sugar. After two hours he relapsed into his former condition, and again I repeated the strychnine, which relieved him, and the patient was quite well when I last saw him.

The *Englishman* says its North Cachar correspondent reports that in one of the Cachar tea gardens Mr. Haffkine inoculated the majority of the coolies. Cholera visited the garden later and none of the inoculated were stricken with the disease, though many others died.

OUR PICTURE GALLERY.

KENNETH BRUCE STUART, M.D., M.R.C.S. (Eng.)

F.R.C.S. (Edin) F.A.C.S.,

Late Coroner of Calcutta.

THE features of the portrait in our Picture Gallery of to-day must still be fresh in the memory of many of our readers. They are the features of one who in a very marked degree united the characters of trusted medical adviser and beloved personal friend. Even in the long roll of medical worthies who have won name and fame in the City of Palaces few, if any, have achieved a higher place in public esteem or a warmer place in the affections of a very wide circle of friends. KENNETH BRUCE STUART was born in Calcutta on the 12th September 1835. His father, DR. ROBERT STUART, was a well-known and very highly respected physician, who practised in Calcutta for the long period of 32 years. The earlier part of his education he received at the old St. PAUL'S School, in this city, now represented by the school of that name in Darjeeling. With his father's profession in view he was sent to Scotland to complete his preliminary studies in the Medical College, St. ANDREWS. Thence he proceeded to Edinburgh University, in the then famous medical school at which he, at the early age of 21, completed his professional course. Among his college friends may be named DR. W. S. PLAYFAIR, DR. GARROW GRANT and DR. D. B. SMITH. Early in 1857 he was admitted a member of the Royal College of Surgeons, London; and having now made up his mind to compete for an appointment in the Indian Medical Service he, in the autumn of that year, placed himself under the special tuition of DR. JOHN POWER. It is useless to speculate on what might have been if this purpose had been carried out, as it well might have been, to a successful issue; but, unfortunately, the special course had hardly been entered on, when a letter from his father led to an entire change of plan. It was the year of the Mutiny. His father was still comparatively young, but with his long continued service in the trying climate of Bengal, and perhaps under the peculiar strain of the time, his health had given way. He held several important public appointments, and had at the same time an extensive private practice. In these circumstances it was only natural that he should turn to his son for help. With characteristic unselfishness and devotion to duty, KENNETH STUART at once recognised his father's claim to his services, gave up all thought of competing for the Indian Medical Service, and prepared to return to the East. As no examination was available at Edinburgh, where he had studied, he presented himself for examination at St. ANDREWS, and obtained the degree of M.D. on the 23rd December 1857. On his reaching Calcutta early in the following year, his father almost immediately went away for a change, and DR. STUART, though only 22 years of age, found himself put to the very severe test of carrying on his father's extensive practice single-handed. He stood the test and at once established his reputation. This was a very happy beginning of what may be called a partnership between father and son that lasted with unabated confidence and affection till the

lamented death of the former, five and a half years afterwards. In 1841, Dr. STUART received his first personal appointment from Government. He was desirous of returning to Scotland for the purpose of being married. His father's health had greatly improved, and so he could be spared for a few months. Having learned that Government wanted a medical man to take charge of insane soldiers who were about to be sent home *via* the Cape, he applied for, and received the appointment. The voyage proved very long and tedious, and the vessel arrived a month late, to find that she had been given up for lost! But Dr. STUART had the satisfaction of being able to report well on all the patients that had been put under his charge. During his stay in Scotland on this occasion he was elected a Fellow of the Royal College of Surgeons, Edinburgh. He returned to Calcutta before the close of the year and found himself after another year, once more in sole charge of the large practice and of the various appointments held by his father, who from failing health had to go on leave in January 1862, and was never able to resume duty. Dr. STUART was thus called to act as physician to the Mint, the Customs Preventive Service, the Leper Asylum, and the Alms House; and he succeeded to these appointments on his father's death in July 1863 with all the work which they involved and with a practice steadily increasing, his life became a very busy one, all the more so because he was always careful to keep himself abreast of the literature of his profession. He lived for his patients. He never spared himself when it was in his power to serve them, or to advance their interests. This unflinching devotion to duty added greatly to a reputation for skill and resource which steadily rose. At the same time his relations to his brethren in the profession were ever of the most cordial kind. No one was more careful than he in all matters of professional etiquette. He enjoyed the personal regard and esteem of such leading men as Dr. CHEVERS, Dr. CHARLES, Dr. BROUGHAM, Dr. ARCHER and Dr. BAILLIE & Co., who were always ready to help him when in any way he required their aid. The obligation, however, in such matters was not all on one side. Dr. STUART's practice was so extensive that a considerable variety of interesting medical cases came under his care; and more than one of his medical friends saw cases with him which they had never seen before, and used to beg him to let them know when he met with any others. And here it may be interesting to note that some of his prescriptions came to be so well-known that many, who were not his patients, used to go to one of the dispensaries, and without any prescription ask for "Dr. STUART's Mixture," "Dr. STUART's Powder," &c. Indeed the doctor in charge of the dispensary suggested to him that he might add largely to his income by taking out a patent for these popular prescriptions; but such a course was entirely alien to his generous disposition.

With excellent health and thorough enjoyment of his work Dr. STUART continued at his post without a break until March 1871, when he took six months' leave to enable him to accompany his family to England. So thoroughly had he established his position in Calcutta that some of the very first men in the profession gladly lent a hand

in carrying on his practice during his absence. And so it was, on all subsequent occasions. To the last he could reckon among his personal friends such men as, to name only a few, Dr. D. B. SMITH, Dr. COATES, Dr. ELLIOTT, Dr. MCCANNELL and Dr. HARVEY. Of his career after his return to duty in 1871, no more need be said than that it continued to be marked by the same quiet enthusiasm, the same conscientious devotion to duty, the same self-sacrificing regard for others on his part, and on the part of his patients the same affectionate esteem and confidence. It should however, be noted, though he himself, as one who did good by stealth, would have been the last to permit this, that he added very largely to an already heavy burden by the extent to which he rendered gratuitous services. It has ever been the glory of the medical profession to give its services without fee or reward when such a course seems necessary; and with patients so numerous as his, exposed to all the changes and chances of life in a city like Calcutta, Dr. STUART had his own share of such cases and never failed to respond. The tale of his innumerable deeds of kindness to the broken down, the forlorn, the outcast, the poor, whatever their creed or nationality, cannot be told here. But he had also carried with him to Calcutta the very generous practice that used to prevail among medical men in Scotland, who declined to accept any fee for services rendered to those in the clerical profession. Accordingly, he numbered among those to whom he freely gave his services many ministers and missionaries connected with the various religious denominations in the city, together with their families. And most ungrudgingly did he serve them; in not a few cases he had the patients brought to his own house, so that he might the more effectually attend to them. There are those alive to-day who can never forget that, humanly speaking, they owe their lives to Dr. K. B. STUART, and who lovingly cherish the memory of the unceasing care and tenderness and resource by which he rescued them from the very jaws of death. It was one such, a missionary's wife, who worked for him the text he loved to think of as a motto: "I was sick and ye visited Me.....Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto Me." But Dr. STUART must not be regarded as caring only for things of his own profession and practice. His was a broad, genial, sympathetic nature. He took a large-hearted and large-minded view of his duty as a member of the community. We find him having an important part in a great variety of institutions, educational, philanthropic, charitable, and religious. His services to the Leper Asylum, the Alms House and the Fendall Home may be recalled. He was a warm supporter of the Doveton College, and willingly lent his aid for many years in the management of that institution. He took a very prominent part in carrying on the work of the Uncovenanted Service Family Pension Fund, which has proved such a boon to many a widow and orphan. And so convinced was he of the utility of such institutions, that he was one of the first and warmest supporters of the General Family Pension Fund.

It was in 1876 that he first discovered the presence of organic disease in his system. He continued two years longer at his post, as the disease was not severe in form,



Yours sincerely
Kenneth B. Stuart

and his medical adviser, Dr. CHARLES, was of opinion that he would enjoy as good health in India as in England. During a six months' leave in 1878 he took the opportunity of consulting Dr. PAVY in London, who entirely confirmed the diagnosis that had been made two years previously in Calcutta. Returning to the East, he resumed work with his usual cheerfulness and assiduity, and even added to his burden by giving a larger share than ever of his time to those demands which come in ever-increasing volume on men who have won public esteem and confidence. The disease that had seized on him advanced slowly but steadily. He knew it could have but one issue; it was the messenger of death; but he worked on with a brave, unflinching heart. If there was any difference it was only that he gave himself, if possible, more faithfully and diligently than ever to the discharge of duty. No one who saw him on his daily round, or at some public board, or in his hospitable home in Kyd Street could ever have suspected that he was consciously living under the shadow of death; he was still so bright and cheery and active. His last visit to England was paid in 1881. This was his longest rest, for he did not return to duty for a whole year. The rest was very welcome, and he enjoyed it greatly, but he longed to get back to his work. It had always been so when he was on leave, for his patients were to him personal friends, and he was ever wondering how they were getting on. And he had the gratification of knowing that this warm personal interest was cordially reciprocated. Many were the tokens of individual affection and gratitude that he received from time to time; and in 1879 on the occasion of Mrs. STUART's return from England, his patients united in presenting her with a substantial token of their deep regard for herself and her honored husband.

In March 1884 Dr. STUART was made a Fellow of the University of Calcutta, and took his place in the Faculty of Medicine. The following month brought him his crowning honor, his appointment as Coroner of Calcutta. His appointment was hailed with special satisfaction. He had an unrivalled acquaintance with Calcutta; for he had been longer in practice than any other medical man in the city; and he had taken a position in the esteem and confidence of the public "certainly not inferior to that of any of his brethren in the services." The new duties were a very heavy addition to his burden, but the work was entirely to his mind, and he gave himself to it with such vigour and energy that he speedily mastered the details, and surprised even his friends by the ability and skill with which he discharged the duties. The late Dr. COUL MACKENZIE, who as Police Surgeon came much in contact with him as Coroner, was greatly struck by the remarkable success of his work. "You were doing admirably," he said to Dr. STUART after his health had given way. "You were doing admirably; but you ran, when you should have walked." It was Dr. STUART's way. He spared no pains in matters of work and duty; he must always do his very best; whatever his hand found to do he did with all his might. The heavy strain speedily began to tell; all the more that, some months before, a serious development of organic mischief had taken place. As early as May he was urged by his medical advisers to go away for a change, but in view of his recent appointment he was anxious to defer doing so till September, the month he always dreaded most of all the year. His strength was more nearly exhausted than any one suspected, and on the 24th June he completely broke down. A change to Coonoor gave for a time some promise of a rally. It was a lovely spot, and he greatly enjoyed the rest. Indeed he was able to take pretty long walks, and even his old brightness, which for a little had forsaken him, returned. The improvement was only temporary. Early in October he began to fall back, and it was resolved he should return to Calcutta. His indomitable spirit once more asserted itself, and he actually resumed work for the first half of November, only however to find that the effort was greater than he could

sustain. He might have left Calcutta for Coonoor, as some of his medical friends advised, but he knew that no change could now restore his health, and he desired to die where he had so long worked. Within a month the end came; he passed away on the 14th December 1884, at the early age of 49. Tributes to his memory appeared in the leading Calcutta papers, and memorial minutes were adopted by the various bodies on which he served; but perhaps the most touching proof of the profound regret called forth by his death was supplied by the numbers of his patients and friends who for months after continued to visit his grave in the Park Street cemetery. Such spontaneity of universal sorrow was at once a surprise and a comfort to his bereaved family.

Dr. STUART's memorial as a medical man is to be found not alone in the distinction he achieved, or the honors he won, but rather in the grateful and loving remembrance of him by his numerous patients as the true type of a trusted family physician. He had a keenly sensitive nature, but his sensitiveness was so blended with sympathy and unselfishness, that it only added a grace to his natural charm of manner. A warmer heart never beat in human breast; never was there a truer, nobler character. He had a remarkable power of winning affection and attaching friends. In the sick room he was sympathy itself; his bright sunny presence was an inspiration. He won for himself a special reputation for the successful treatment of children. He had the happy knack of winning the confidence of the little folks; indeed he used to lay himself out for this, and his patients will readily recall some of the ways in which he set to work. "I always make friends with the children," he would say, "when they are quite well, and so when they get ill, they are not a bit afraid of the doctor, and shew their tongues quite readily." He had a wonderful faith in the vitality of children which made him refuse to give up hope of their recovery till the very last. Ever most tender and assiduous in his attention to the little sufferers, his resource seemed all but boundless; and he had the supreme satisfaction of recording complete recovery in some of the most desperate cases. Indeed it was much the same with old and young. Patients of his to-day remember with profoundest thankfulness how he tended them, or pulled some loved one through when hope was gone.

Dr. STUART, was in the fullest sense of the term, an honorable man with a remarkably high sense of duty and a deeply sympathetic nature, but the master-key to his character and work was his profound faith in God. An essentially religious man, his religion was not of the obtrusive or effusive kind, but still, deep, all-pervading; in a word he was ever a Christian gentleman. His profession gave ample verge and scope for his sense of fears in mortal things, and his own long illness might well have caused perplexity, but his faith in Divine Love and Guidance never faltered. And so he could face death with a brave heart and a calm assurance that all was for the best. He ever lived "as in the great Taskmaster's eye." Of himself or any service he had rendered to any one he thought very little; his ambition was simply to do good; he was content, with Sir HENRY LAWRENCE, to have "tried to do his duty."

The happy and hospitable home so well known to Dr. STUART's friends has long been broken up. Mrs. STUART and her two daughters now reside in London. The elder of two sons has adopted the medical profession and now carries on a large practice in the University City of Durham, following close in his father's footsteps. The younger son is winning golden opinions as a civilian in the North-West Provinces, and will, doubtless, be heard of by and by in some of the higher posts of the service.

Miss Dora Caine, M.B., daughter of Mr. W. S. Caine, M.P., has been appointed House Surgeon to the Children's Hospital at Hull.

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SOME CONSIDERATIONS ON THE USE OF ALCOHOLIC STIMULANTS.

WHEN in 1893 the feeling ran high that there was a pressing necessity for more stringent legislation than that existing for dealing with habitual drunkards, there was probably a fear that the drink curse was considerably on the increase; and the unanimous opinion of important and influential medical and surgical men and bodies, tendered before the Departmental Committee on inebriates, of the need for the compulsory exclusion of inebriates, suggested rather a gloomy, if not a hopeless, picture in the matter of alcoholic consumption. We have to thank God however, that the British nation is not quite so bad in this respect as it has been feared; and that it has not been drifting alarmingly into alcoholic abuse. A record of the nation's consumption of alcohol, tea, coffee, cocoa, tobacco, and chicory for the thirty-two years, 1861—1893 shows that while in 1861 the consumption of wines and spirits averaged 1.22 gallons per head of the population, it averaged 1.35 gallons in 1893. This cannot be regarded as an alarming increase; but alongside with this, there is the more pleasant consideration that the use of wines and spirits has fallen steadily since 1876, when the average consumption reached its highest (1.80 per gallon per head of population) in the period 1861—93. The increase in the consumption of beer however, has been rather large, having stood at 24.3 gallons a head in 1861, and at 29.6 gallons in 1893; and if the conclusions of Dr. J. MURRAY GIBBS in an article contributed to *Hygiene*, viz., that the drink of a nation tends to the formation of the national character, and that beer creates a selfish, argumentative, quarrelsome disposition, be correct, England's belligerent proclivities must have been considerably stimulated in recent years; and this may afford a physiological explanation of our many brawls and political complications with frontier and other tribes! With regard however, to the free use of beer, we have the opinion of Dr. OTT of Philadelphia, who has had fifteen years of experience among beer-drinkers—that a free indulgence in malt liquors results in a ruddy countenance and a cheerful laughing disposition; and with these diametrically opposite opinions of the two doctors we are at a loss to decide whether the increasing beer-drinking proclivity of England is an omen for good or evil.

In the record under consideration, we are told that the consumption of tea, coffee, &c., has increased from 4.38 pounds per head of population in 1861 to 6.90 pounds in 1893. Now whatever be the stimulant or beverage adopted as a national drink, or generally used by a nation, it is admitted that its abuse is a source of harm. Dr. J. MURRAY GIBBS in the article already referred to, says that their and caffeine act on the intellectual system and on the nerves controlling digestion, and that a continuous or prolonged excitation of these by an irrational use of tea, coffee, &c., results in indigestion, and that excessive

use of these non-alcoholic beverages has much to do with filling our lunatic asylums. In connection with the foregoing it is interesting to consider the remarks of Dr. PETERS, before the Toronto Medical Society, &c., that notwithstanding the progress and improvements that have been made in many an important direction in our profession, within the past thirty years, we are yet confronted with the regrettable fact that nervous and mental diseases have increased largely. Many or several causes may, of course, contribute to a result; and the increase in mental and nervous disorders of the past thirty years can be explained in various ways; but it must not be forgotten that the excessive use of tea, coffee, &c., is one of these, and that while we counsel temperance in alcoholic drinks and the substitution for them of non-alcoholic beverages, we must not regard the latter as wholly harmless, or that they may be indulged in to any extent with impunity. We have no doubt but that the temperance movement of recent years has given much impetus to the tea trade, while the extension of education and of religious influences and teachings have helped materially in the dangers from alcoholic abuse being better recognised and more feared. While physical evils doubtless result from the excessive use of non-alcoholic stimulants, those evils are not so readily induced or of so permanent a nature as the evils following unreasonable alcoholic indulgence; and viewed in this light, the record of the use of stimulants for the past thirty and odd years is certainly not alarming, if it even cannot be pronounced satisfactory. And if all those who push forward the consumption of the their and caffeine containing beverages, will but bear in mind the evils of the excessive use of these, and if in their advocacy of their adoption in substitution of alcoholic drinks they combine mild counsel against carrying the thing too far, we may, in regard to the use of stimulants, expect the nation's record of the next thirty years to be even more satisfactory than that of the past.

It would indeed be very interesting to have similar statistics as to the consumption of stimulants in India. In the matter of the use of alcoholic stimulants by the people of India, we have had some facts and figures given to us in a lecture delivered in the Baring Institute, Mussoorie, on the 29th August 1890, by the Revd. THOMAS EVANS. The figures and statements, however, do not permit of things being worked out to arithmetical conclusions, but allow only of unsatisfactory inferences being drawn. Mr. EVANS shows that the people of India were not always the abstemious and drink-hating people they are supposed by many to have been; but from the Vedic age to about the sixth century of the Christian era the drink tendency steadily increased, until it grew to be regarded and denounced by leaders of the age as a positive curse. The practice received a great check during the occupation of the country by the non-drinking Mahomedans. Mr. EVANS is, however, of the opinion that the people of the country have grown fearfully drink-loving in more recent times; and these are his sad conclusions:—"The drink traffic of late years has advanced with grant strides in India, and I am sorry to add that the evil continues to grow more and more. Having now for two years travelled India from north to south and mingled with all classes of the people, whose habits and

languages I know, I have found that indulgence in strong drinks has already spread more or less among all classes and creeds in the country, in spite of the strong denunciations of the Shastras of the Hindus, and the Koran of the Mahomedans."

We think that this is the general opinion and the prevailing belief as to the spread of drink in the country. MR. EVANS' statistics are however, not sufficiently satisfactory. His conclusions are drawn from the following figures:—

The excise revenue of the Madras Presidency rose from 21 lakhs in 1850, to 97 in 1888. In the Bombay Presidency the general average of receipts for the five years ending 1882 was exceeded by 37 lakhs in 1889.

In 1888 in Bengal there was an increase of 48 lakhs of rupees over the annual average of a long period previously. About 1890, the excise revenue for the whole of British India was 500 lakhs; while twelve years previously, it was but 230 lakhs. If these figures were worked out, as in the case of the British record, into the number of gallons of spirits which they represent as consumed, and the average consumption given per head of population in the years and periods under reference, one could form a more satisfactory idea of the increasing demand in this country for alcoholic stimulants. The figures given by MR. EVANS shew that the excise revenue has more than doubled itself in recent years, and as our population has by no means increased to this alarming extent and the amount of duty per gallon has not been raised, there is good reason for believing that the country is being fast and fearfully swayed by the subtle influence of alcohol. It is a great sign of the times that a Hindu, though he have little or no thought or desire of embracing Christianity or relinquishing his faith for any other, is very much less than of old, a respecter of those social and religious rulings which stand in the way of his being English-like, and he is willing to spurn the warnings of the Shastras against the use of alcohol, so long as he believes that its use is little less than an English social necessity. We hope, however, that seeing that England's consumption of ardent spirits has declined since 1876, they would follow suit and help to reduce the expenditure of alcohol in India. In considering MR. EVANS' calculations, it must further be borne in mind that in a country like India, it is impossible to say to what extent the people of India themselves have shared in this increased consumption of alcohol, and how far the European population have caused that increase. Our European and English-speaking population has been growing, and this will to a great extent explain the increasing demand for spirituous liquors. At all events all the blame cannot be charged to the people of India. And as it will ever remain little short of an impossibility to determine how much of the spirituous drinks used in the country have been consumed by its people and how much by its British occupants, we can scarcely hope to be ever able to gauge the true fall or rise in the drinking habits of India's people.

A careful analysis of the London *folo de se* statistics from 1884 to 1884 convinces DR. OGLE that June is the *suicide season* as it shows 1,022 per 10,000 suicides, while 697, the lowest figure, falls to December.

THE PARLIAMENTARY COMMISSION OF ENQUIRY INTO INDIAN EXPENDITURE.

THE decision of the British Parliament to appoint a Commission to enquire into the vast expenditure that is involved in the British administration of the Indian Empire, is a supreme opportunity for India's good, if only fairness and straightforwardness are exercised by the Indian Government in permitting such Commission to receive evidence from independent witnesses, qualified to speak on subjects of which they have the fullest cognisance, even though the knowledge and experience thus placed in evidence before the Commissioners should tend to expose a system of mal-administration and extravagance which condemns the past policy of the Indian and Provincial Governments. If, we say, the authorities in India are prepared to approach this Commission of enquiry into Indian affairs in this impartial, fearless and frank spirit, then there is a hope that India's highest good will be acquired by their deliberations; but if all outspoken truthful testimony, condemnatory of the past and present doings of the Government, is to be hoodwinked, pigeon-holed and smothered, so that the voice of the burdened and oppressed is rendered inaudible and impotent, then, of course, corruption and injustice and flagrant extravagance will reign unmolested, and the Commission will be a huge official farce. It is too well known and too keenly felt in India that the official bureaucracy can do anything and everything alongside of the well-adjusted machinery of Indian officialism; while independent non-officialism is nowhere. Government can do as it pleases, since the voice of the people does not and cannot affect its policy. There is no public opinion worth the name in India, to guide or coerce the Government in its actions. Most of the so-called independent journals are subsidised by the Government, and they are prepared to be dumb at the bidding of high officials. Hence it is that the people of India naturally dread the outcome of "Commissions," since such Commissions are made and ruled by the Government. However, let us hope that matters are not going to be so bad this time. Let us approach the Indian Government on the present occasion with the trustful hope that our voice and prayer will have a hearing, and that in matters medical, the authorities will allow the local medical profession to place its evidence before the Commission. We say the opportunity is a supreme one; it is unique in the history of Indian administration, and should inspire in us new hope, new energy, and fire us with enthusiasm and zeal in the great cause of advancing the claims of the local profession to a fair and equal share in every avenue of State work in the Indian Empire, so that every medical man in India may feel and know of a truth that the ladder which leads to honor and distinction in his profession is free and open to him, from the lowest rung to the highest.

Then there is the important question of expenditure on the medical services of this country. We have shewn by a careful system of mathematical calculations that the State Medical Services of India can be remodelled without endangering their fullest efficiency, and that in so doing a vast saving can be effected, amounting to several lakhs of rupees per annum. We have shewn that the separation of the military from the civil medical services will lead

to substantial economy, and we have proved that the inauguration and establishment of a purely civil medical service for the needs of the civil population, not only abolishes an extravagant, unpopular and unjust anomaly, —namely that of employing *military* surgeons in civil work at double charges—but brings into effect a perfect and stable machinery for civil work. We have shown that a great reduction of the Army Medical Staff with British troops can be easily and efficiently brought about by the larger utilisation of Military Assistant Surgeons and this upon the substantial evidence that Army Surgeons have little or no work to do. We have also explained how in our large cities the work of our large hospitals might with real advantage to the public and to the State, both from an educational and an economic point of view, be carried on by honorary staffs, thus abolishing the present expensive and often ineffectual system of utilising *military* surgeons for this purely civil line of work.

It is in the larger use of locally trained medical talent European, Eurasian and Indian, that real economy can be effected.

We shall not enlarge upon these topics, we simply throw them out as head-lines to be used for further consideration and discussion, and we would strongly urge upon the Indian Medical Association and the Medical Association of India to join hands and request without delay that the Government of India will graciously permit the evidence of this united body to be placed before the Parliamentary Commission now appointed to enquire into the expenditure of India.

In this movement there can be no question of personalities or individual claims. It is too general and corporate, and effects the well-being and future of the medical profession of India as a whole. Let us then display a united front, Bengal and Bombay and Madras, one amalgamated phalanx. Of course it can be done, and if all agree it *will* be done. So mote it be.

COMMENTS AND NEWS.

FEEDING AFTER WEANING.

IN feeding infants about to leave the mother's breast, thinks DR. W. L. STOWELL, we must fix the principles and prescribe with common sense according to the case in hand, as on the mode of weaning hangs the *whole* of the subsequent life of the little one. We know that perfect nutrition demands waste and removal of tissue, as well as new aliment composed of nitrogenous and fatty matters, carbohydrates and salts of lime, &c., in which however, the carbon absorbed by children requires to be three or four times per pound weight as that needed by adults, but as the exact weight or exact age of the child is not a proper criterion in arranging a dietary, due regard must be paid for season and individual idiosyncrasy. Except in cases of acute illness of the mother, the child should be *gradually* weaned as soon as the teeth begin to come, i.e., between the 8th and 8th month, when diluted cow's milk will be the most appropriate food; but after two or three months it may be supplemented by easily digestible starches, and as the ptyalin develops, meat and other nitrogenous compounds are indicated. Bulky food stimulates digestion, but concentrated foods are to be avoided as not promoting natural activity; and fried food, re-cooked meat, and rich foods are interdicted as the little one's system is not

strong enough to wrestle with foreign substances in excess of natural diet. It being remembered that in the *excess* of one ingredient begins the mal-assimilation that ends in indigestion; sugar and starch in moderation are good as they assist exudation, but in large quantity they detract from what should go to the albuminoids, and often set up persistent gastric irritation.

Table of food Values.

| | Hours for digestion. | Carbo Hydrates. | | | | | | Total Salts. |
|--------------------|----------------------|-----------------|-----------------|--------|---------|--------|--------|--------------|
| | | Proteids. | Carbon and Fat. | Sugar. | Starch. | Salts. | Water. | |
| Human Milk | 2-00 | 1-78 | 3-88 | 0-84 | .. | 0-38 | 87-22 | 12-66 |
| Cow's Milk | 3-00 | 2-75 | 3-75 | 4-42 | .. | 0-68 | 87-20 | 12-61 |
| Eggs { Raw | 1-50 | 14-00 | 10-50 | .. | .. | 1-50 | 79-00 | 20-00 |
| { Boiled | 3-00 | | | | | | | |
| { Hard boiled | 3-15 | | | | | | | |
| Bread { Stale | 2-00 | 8-10 | 1-00 | .. | 51-00 | 3-30 | 57-00 | 62-00 |
| { Hot | 2-15 | | | | | | | |
| Potatoes { Baked | 2-20 | 2-10 | 0-20 | 3-20 | 18-50 | 0-70 | 78-00 | 22-00 |
| { Boiled | 2-30 | | | | | | | |
| Beef Cooked { Lean | 3-00 | 19-50 | 5-50 | .. | .. | 5-10 | 72-00 | 28-00 |
| { Fat | 3-00 | | | | | | | |
| Fowl | 4-00 | 21-00 | 5-50 | .. | .. | 1-70 | 74-00 | 26-00 |
| White fish | 2-00 | 18-10 | 3-90 | .. | .. | 1-00 | 78-60 | 22-00 |
| Apples | 0-22 | P-2-72 | 7-88 | .. | .. | 0-44 | 86-04 | .. |
| Bananas | 0-42 | F-0-53 | 19-65 | .. | .. | 0-78 | 73-80 | .. |

The millionaire's pet and the labourer's child start with the same anatomy, but while the former has every want supplied, the latter must take what it can get. From the above table, we note that meat contains the most salts and the most nitrogen, and ROUTH says, "children need much meat to build up their bone and muscle, but as prolonged cooking coagulates the albumen of the meat and only extracts the salts, beef tea, to be of any value, should be a cold infusion of a pound of steak to a pint of water, not heated until just before serving." Fruit is admissible after the second year, but stimulants *never*, and at the sixth or seventh year when the deciduous teeth fall, the child must be urged to chew his food thoroughly and eat slowly; while at the approach of and during puberty *rich* foods or highly spiced viands should be strictly avoided, lest they increase sexual excitement in the immature.

THE PHYSICIAN'S RELATION TO THE LAITY AS REGARDS THE HYGIENE AND PHYSIOLOGY OF THE SEXUAL ORGANS.

TRUE physiology teaches that in the *proper* exercise of any natural faculty or propensity in man, there is *nothing* that is impure, unholy, low, sensualizing or in any way degrading but, as DR. S. B. ELLIOTT points out, though every second of the hour a human soul is born into the world, the majority, by far, of these swell the gruesome list of unfortunates, whether of the imperfect, the vicious or the diseased, simply because too little discretion is exercised in the matrimonial state in which people mate with every one and any one, regardless of health, age, temperament, and the means or ability to support and educate a family; while an abominable mock-moesty and hypocrisy urges the law, the clergy, the medical profession and intelligent parents to keep the masses and their children in ignorance of the function of reproduction being the most influential of all others on the morals, physical status, public health, population, disease, mortality, personal reputation, property, legitimacy and even life itself, of human beings. *Thousands* of women suffer from uterine diseases and disorders and lack of vein, tonicity and vigor, as the result of either too little attention paid to prenatal influences or of too frequent and improper sexual intercourse, neither of which would occur were the masses not sinfully kept in ignorance that stimulants, over-rich food, ill-assorted marriages, sexual excesses and lascivious talk, all conduce to develop permanent congestion and constant irritation of the pelvic organs predisposing to precocious and entirely morbid amateness resulting in vice, misery and

disease not in themselves alone, but in their innocent offspring also. Bad habits must be corrected from the cradle, where habits are too often encouraged to play with their genitals, and children must be taught to eat, drink, dress and exercise hygienically and must be given proper moral instruction; for it is the greatest fallacy to attempt to separate the mind and body in educational arrangements when nature teaches the inseparable relation of the moral and the physical life. Here then lies the solemn duty of the physician to rend asunder the veil of mock-modesty by insisting on parents teaching their children the true hygiene and physiology of the sexual organs, instead of letting them be initiated into this subject by carnal practices at the instigation of persons of low morals; and these lessons of abstinence and continence should be firmly and irrevocably inculcated before puberty, when the sudden and rapid development of the sexual organs, with their consequent great amorous impulse, instinctively point to touching and manipulation with every risk of either too early yielding to carnal temptation or of contracting the baneful habit of masturbation which may mean the ruination of the victim morally, mentally and physically; and Doctor! lay the lesson well to heart that you are criminally guilty and a moral coward if you do not enlighten your patients of the importance of regulating pre-natal influence and nipping bad habits in the bud.

SOME FACTS ABOUT THE RECENT SMALL-POX EPIDEMIC IN CALCUTTA.

DURING the quarter ended 30th March last, there were 1,235 deaths from small-pox within the Municipal limits of Calcutta, a greater number than in any quarter since 1865, when there were 3,001 deaths during the same period. Of the cases reported, 1,022 occurred in Urban Calcutta as against 64, the mean of the previous decade, and 213 in Suburban Calcutta as against 25, the average of the preceding five years. There were 139 deaths in January, 320 in February, and 770 in March. Of the 1,235 deaths, 735 were males and 504 females; 756 occurred among Hindus, 358 among Mohammedans, 110 among Christians and 11 among other classes. The mortality fell heavily on infants under five years of age, no fewer than 384 or 31.1 per cent. of the total number of deaths being under that age, and of this number 279 were under two years of age. The mortality between five and ten years of age was small, being 48; between 10 and 20 years of age it was 113, between 20 and 30 it reached 302; between 30 and 40 it amounted to 242; between 40 and 50 it was 98, and above 50 years of age it was 48. As many as 851 of the 1,235 deaths or 68.9 per cent. occurred in huts, and the remaining 284 or 31.1 per cent. in brick houses, shewing that the mortality was greater among the poorer classes. Colootollah and Mochheepara Wards, which are inhabited by a low and migratory class of the population, furnished 376 deaths or 30.4 per cent. of the total in the town, while Hastings had no death from small-pox during the quarter. Of the 1,235 deaths, 248 or 19.7 per cent. were reported to have been vaccinated, 247 or 20.0 per cent. to have been inoculated and 686 or 55.5 per cent. to have been never vaccinated or inoculated. There were 58, or 4.7 per cent., whose condition was unknown, and there was one who had previously suffered from small-pox. There can be little doubt that many of the 248 deaths reported as previously vaccinated do not really belong to this group. Some of the statements of friends of the deceased as regards vaccination were afterwards ascertained to be incorrect, but in the majority of cases, it was impossible to ascertain the real condition of matters. Inoculations were also not uncommonly mistaken at first for vaccination.

According to a return just issued, 28,140 males and 13,244 females were vaccinated in Calcutta during the months

of January, February and March last. The fees realised for private vaccination during that period amounted Rs. 3,440-4-0 against Rs. 354-4-0 during the same period the previous year.

PHYSIOLOGY AND SURGERY OF THE SPLEEN.

Cor sentit, pulmo loquitur, sed contactu trax, splen ridore facit, cogit amore jecur, or, while the heart felt, the lungs spoke, and the bile contained anger, the liver was the seat of love and the spleen was made for laughter, so thought the ancients; but while in later times to be splenic was to be bad tempered, modern research shews that the functions of the spleen have nothing in common with emotional states, yet nobody knows for certain what part the spleen actually plays in the animal economy, as the survival and thriving of animals after the extirpation of this gland point to the conclusion that of all the large organs the spleen is the least necessary to human existence. While GIESKE confirms DUPUYTREN'S observation that accessory spleen is common in young persons, and especially in foetuses, ROSENMULLER came across only 6 instances in 480 cadavers. J. P. WARLESSE agrees with VULPIUS' decree that except in leukemia, chronic congestion and amyloid degeneration, the spleen is quite susceptible of legitimate surgical attack. VULPIUS furthermore shews (1) the possibility but not the certainty of the entrance of colorless cells in the circulation from the spleen, which disintegrates the red cells, but does not necessarily form or reform them. (2) No positive difference in the blood of the splenic artery and of the vein. (3) Enlargement and increased activity of the spleen in acute general anemia, and while the spleen is thus congested, the blood is found to contain the maximum of red cells and the minimum of white. (4) The thyroid gland has no vicarious relation to the spleen. (5) Removal of the spleen causes only a transient decrease in the red corpuscles and increase in the number of white cells. (6) After total removal of the human spleen there is no splenic development, but there may be vicarious hypertrophy of an accessory spleen, within the ligamentum gastrosplenicale, of a roundish form and varying size, but without a hilus. (7) In persons without spleen the regeneration of blood is retarded after hemorrhage. (8) After extirpation of the spleen the lymph nodules and the bone-marrow acquire an increased blood-forming activity.

ABUSE OF MEDICAL CHARITY.

WARNING notes are being sounded from the West that many of those who can well afford to pay for medicine and medical attendance deliberately take a mean advantage of gratuitous consultations and treatment even to cruelly depriving the really poor and truly deserving of hospital room and necessary medical attendance. That such a thing should be allowed to exist is a crying shame and an abominable holocaust of sacred charity, but as DR. G. F. SHEDDY sensibly points out that these pincies and malpractices will continue so long as dispensary doctors and beginners of the Galenic system gratuitously treat every patient who comes in the hope that they may extend their out-door practice or *limn* some one who can afford to pay a trifle. That by doing this there is not the least doubt that times without number "charity" is extended to those who have no right to expect or demand any, and this wholesale "giving away" of medical favors to those who are well able to pay for them is not only robbing the poor, but also "cutting our own throats." In the rush of business and the multiplicity of calls on his attention it would be impossible for the physician to discriminate between the rich and middle or poorer classes or the deserving from the mass of undeserving, and to prevent this imposing on the charitable instincts of the profession it is urged that only three methods are practicable: (1) Refuse free medical aid to any one not presenting a certificate of

poverty from any charity-organization society. (2) Refuse to act as unpaid or honorary physician to any charitable dispensary or hospital where free advice is given. (3) Maintain the dignity of the profession and so unite together, that when one of the profession is insulted by hospital managers or dispensary trustees, there will not be a crowd of eager brethren in line for vacant places.

EXPERIMENTS WITH TOXIC PRODUCTS ON MALIGNANT GROWTHS.

THE *Journal of the American Medical Association*, summarizing the experiments of DR. W. B. COLEY of New York City with toxic products on malignant growths, finds that of forty-four cases the results have been satisfactory. The cases were made up of sarcoma, carcinoma, and of doubtful sarcoma or carcinoma. The doubtful cases are put out of consideration, as also are the cases of carcinoma, as the results of the treatment with regard to them were not conclusive, and twenty more cases of sarcoma alone are analysed as follows:—One case of recurrent sarcoma of neck and tonsil, which was twice operated on, and of which no hope was entertained, after three years of cessation of toxine treatment, had but a trace of tumor left and no tendency to the recurrence of malignancy. An equally hopeless case continued well fourteen months after treatment was stopped. One case was well twelve months and another three months after treatment was discontinued. One case was well after one year's treatment; eleven cases showed marked improvement, and ten slight temporary improvement under the treatment. In three no effect was produced. In his earlier cases DR. COLEY tried to effect a cure by producing erysipelas by direct inoculation, but found the procedure uncertain and even dangerous. He concluded that the active principle was the toxic product of erysipelas, and hence adopts the treatment of injecting the toxic products.

THE REGISTRATION OF MIDWIVES.

A BILL is now before the House of Commons for the compulsory registration of midwives and the prevention of accouchements by unqualified persons. This Bill provides that midwives should be altogether independent of medical men, and that they may only attend cases of "natural labor;" but unfortunately no provision is made for protecting the public from dangerous ignorance or for penalties or for the punishment of unregistered persons who may continue to practice midwifery *ad lib* and flourish unchecked, while other clauses in the "draft" are so foolish and so detrimental to the interests of the medical profession that a London contemporary writes that the most careful attention of medical men must be given to this matter, and united action taken in strong opposition to it if they desire to avert the grave dangers to themselves, to their profession and to the public, and prevent the wholesale slaughter of innocent babes and parturient women, which would result inevitably, if the Bill for the Registration of midwives becomes law in its present highly unsafe and ill-advised propositions and enactments.

CHARITY ORGANIZATION AND MEDICINE.

As slowly but aye too surely, the old style of hospitals, dispensaries, &c., originally started for advertising individual powers and so securing a large share of practice and since then regularly maintained, is sapping the life blood of the medical profession, by taking away patients, who could pay, from adjacent physicians, DR. GEORGE M. GOULD notes that these evils and others closely allied to them instead of being endured, ought to be cured by getting into personal relations with our dependents to procure a permanent cure by thorough means, of the causes which led to the sickness instead of perpetuating unhealthy conditions and increasing

sickness and disease by "bits" of ineffective treatment; but the prevention of disease in the future can only be obtained by every doctor and every intelligent citizen co-operating to secure individual health and vitality by hunting out diseased sick persons, looking after them till complete recovery, and in these ways cure disease and the allied evils by which the universe is cursed with paupers, blind, deaf, dumb, idiotic, imbecile, insane and all others of the class for which charity is solicited.

TIGHT LACING.

A GREAT deal of controversy is running on this question. Some argue that tight lacing conduces to the begetting of a degenerated weakly progeny and obliteration of the roots of the dorsal nerves in at least 80 per cent. of the corset habitues, and others contending that wasp-waists are quite compatible with health and elegance of form, but the majority of observers agree that though tight lacing does produce bad results, still these results to a great extent depend on the amount of constriction employed, and since the richer classes have abandoned "five ladyism" for golf, tennis and other healthful exercises, corset wearing has not prevented present-day English women from growing taller and finer than ever, even though their mothers were addicted to tight lacing, nor have the male youth of Great Britain suffered for their mother's variety. Yet it is an admitted fact that the woman of the poor are bigger and healthier than their mothers, and give birth to stronger and better developed offspring.

SUCCESSFUL AND DESERVING HOSPITAL ASSISTANTS.

THERE are among the Hospital Assistant class a large number of really able and deserving young men, who simply lack opportunity and encouragement to give abundant evidence of their exceptional fitness for posts of trust and professional promotion. In Madras, the death of one of the collegiate staff, who was at one time a Hospital Assistant, brought into prominence the excellent tutorial work done for many years by this gentleman, and it was thought that his mantle would have fallen on a member of his own class, but it seems things have arranged differently. Among the many applicants for the post was Hospital Assistant C. A. THORNMAN. This young man is a matriculate of the Madras University, and at the examinations stood first in almost every subject in the curriculum in a batch of 80 students. His past collegiate career has been remarkable for its usefulness and success, and the eulogiums passed on his conduct and work by surgeons of the Indian Medical Service, under whom he has served, are exceptionally good. There are others in his service as deserving as MR. THORNMAN, and we sincerely trust that the Surgeon-General of Madras will not lose sight of the merits of these humble subordinates, and that encouragement may be given them.

SAMUEL WELLS, M.D.; LONDON.

IN the death of DR. SAMUEL WELLS of Madras, the Eurasian community has lost one of its brightest ornaments. He was educated entirely in Madras, and was the Johnstone Gold Medallist of his year. He proceeded to England, and after a brief residence obtained the much-honoured degree of M. D. of the London University. For twenty-five years he held medical charge of the Hosur Remount Depot, and was held in high esteem by the Madras Government for his faithful services and his many sterling qualities. DR. WELLS was a patriot of a high order, second only to his renowned friend and colleague D. S. WHITE, the ABRAHAM LINCOLN of Madras. He was highly respected and loved by the domiciled European and Eurasian community, and was Vice-President of their Association. DR. WELLS died on the 4th June from Bright's disease. He lived a quiet life, and was known not so

much by any stirring episodes, but by the elevating and inspiring influence of his course of pure living and good works.

A WOLF IN SHEEP'S CLOTHING.

AN anonymous scribbler in one of the local dailies, vilifies the non-official profession as a whole, by asking, "Should or should not a medical certificate be countersigned by a Presidency Surgeon?" And this anonymous personification of duplicity answers: "It appears to me that there can be but one answer to the question, and that is, most certainly yes." (This refers to the certificate of a private practitioner given for a law suit). Now the orientalism of this pseudo-Anglo-Indian are too well known to escape detection. A sneak is a sneak always, and he is often like his prototype, "the father of lies," in every particular. This Judas is Mosaic in name, though not Hebraic in religion, if the latter virtue enters into his moral constitution at all. We seriously doubt it. For to start with, he heads and tails his letter to the lay press with A LIE. His quotation from the *Record* of the 1st June as to the heading of the article concerning "A Public Prosecutor making mistakes"—which by the way, is the correct heading of our article—is wrong, and this our sneaking reviler knew only too well, for he is a careful reader of the *Record*, even down to our "Notices to Correspondents," a word or two in the latter having in all probability excited his venomous spleen. To continue his untruthful and intentionally misleading fabrication, he painfully endeavors to induce the readers of the local daily (which has an official medico as a shareholder and penny-a-liner) to believe that in our editorial comment on the arbitrary and illegal action of the Public Prosecutor in regard to the medical certificate of a private practitioner, that the *Record* suggests and implies that the Indian Medical Association will be called upon to take action in the matter. Now no hint of any such movement finds place in our article, and to publish such a statement is a grievous perversion of the truth. We state in the article in question that "It is perfectly correct that the Government enacts that medical certificates granted to its own servants shall, before they are officially accepted, be either signed or countersigned by a Presidency Surgeon. Nowhere, however, in its Rules or Regulations does the Government enact, that in courts of law, certificates shall not be accepted when signed by qualified men other than Presidency Surgeons." The fact that Government has made no such law, is the correct answer to Judas' query, and if he in his sycophantic nature does not see the justice of the rulings of the State towards private practitioners in this particular instance, it can only be ascribed to the ascendancy of his own moral turpitude over those finer feelings that make a man, A MAN. The Devil often quotes Scripture and ofcourse, wrongly but cunningly, and so our would-be Anglo-Indian from Asiatic Turkey in a vain effort to quote pathology, mis-spells the patronymic of almost every bacteriological authority he quotes and even stumbles in the orthography of the old-fashioned Scotch name of LAWRIE. O tempora! O mores! Fie for shame! Thou "Ap-ke-waste" hero, thou turn-coat, thou scariot! Times out of number hast thou betrayed thy brethren. The existence of the "Associations" gripe thee, for thou hast not been trusted in "office" nor wilt thou be, for thou art well-known to be a WOLF IN SHEEP'S CLOTHING.

FINED FOR A WRONG DIAGNOSIS.

AN action has been tried in Dublin, which is of great importance to the profession, and apparently establishes a decision which will have serious consequences. The plaintiff was a shopkeeper named MASOX, and he sought damages from the defendant, DR. JOHN R. HANSEN, of Rathmines, for having negligently diagnosed an small-pox as a disease called *erythema nodosum*. The patient was one of the plaintiff's

employee; she was removed to Cork-street Fever Hospital, and the case was reported by the defendant according to the Act, as a case of small-pox. The plaintiff alleged that his business was damaged in consequence. Evidence was given that the case was not one of small-pox. For the defence it was pleaded that the words were privileged, and were written in compliance with the Notification Act, and in the belief that they were true. MR. JUSTICE MURPHY said the chief question to decide was whether the defendant had exercised fair and reasonable care and skill as a physician in advising that the patient should be sent to a hospital, and whether he reasonably and honestly believed that the girl was suffering from small-pox. The jury found for the plaintiff with £100 damages. The verdict is of so serious a character as affecting the position of medical men throughout the Kingdom, that an appeal should be made so as to settle the liability of a medical man once and for all.

THE PUBLIC PROSECUTOR WHO BLUNDERED.

THE *Indian Planter's Gazette*, commenting on our remarks in the case reported in our issue of the 1st June, says:—"We very willingly give prominence to an account of a disgraceful piece of high-handedness on the part of the public prosecutor, BAROO ABHUTOSH BIRWAR, of the Scaldah Police Court, which occurred during the progress of the Gonne Croft case, appearing in our contemporary the *Indian Medical Record*, and we entirely endorse our contemporary's remarks. We trust also that the matter will not be allowed to rest where it is at present, but that steps will be taken to represent the conduct of the Magistrate and the Public Prosecutor in a quarter from which redress is obtainable. If it is allowed to drop, suitors will be at the mercy of any jack-in-office who may choose to enunciate regulations of his own, and it is certainly a new and hitherto undiscovered quality in the indigenous Bengali pleader that he should be found to be a competent judge of the value of a medical diagnosis. If a man has to choose his doctor to suit the public prosecutor's fancy, the incidental troubles of setting the machinery of the law in motion will be increased a hundredfold."

OFFICER AND NO SOLDIER, LIEUTENANT-COLONEL AND NO DOCTOR!

A STORY is told of a young subaltern, who at a ball was addressed by a General as "soldier." He tartly retorted that he was "not a soldier, but an officer." "All right officer and NO SOLDIER," said the General, "how old are you?"

The youth might easily have been excused; but such snobbery in a grey-headed member of our profession is unpardonable, and shows the ridiculous effect of giving medical gentlemen high-sounding military titles. We quote from the *Anglo-Indian Recorder*:—

"A lady residing at an up-country station wrote to the military medical officer, who was, to boot, 'Civil' Surgeon of the station:—"Dear Doctor,—I am sorry to say baby has a gumboil; would you kindly call over and bring your lancet." She received in reply a memo to the effect that there was no such person as "Dr."—in the station; but she was equal to the occasion, and wrote again—"Dear Brigade-Surgeon Lieutenant-Colonel,—sorry to tell you baby has a gumboil, would you kindly come over and bring your sword!"

"PROFESSOR" VERSUS "LECTURER."

THIS is one of the wonders of this land, or at all events one of the things that it has been found difficult to satisfactorily explain. The moment a Commissioner L. S. A. is appointed to a chair in a medical college, he is forthwith transformed into a *Professor*; but all the jugglery, intelligence, or honest toil of an M. D. Assistant Surgeon, or of one however highly qualified, cannot raise him to anything more in name than a *Lecturer*. And how strangely indeed does fate favor the former. He may go week after week into a new chair and the

mantle of professional lore is supposed to descend upon him immediately he enters each new sitting. But when the Assistant is accommodated in any one of them, the star of brightness and of intelligence is immediately obscured to the official vision. Who can explain, and who will remedy the disagreeable phenomenon?

THE INTERNAL USE OF CARBOLIC ACID IN GONORRHOEA.

FEW diseases have been treated with so many drugs and with such disappointing results as gonorrhoea. DR. EDWARD BALM of Parbhani, since the past few months, gives 3 to 5 minims of carbolic acid in solution three times a day for this complaint and with satisfactory results, and he gives as a reason for adopting this line of treatment, that gonorrhoea is a specific disease depending on a specific bacillus, the gonococcus. Carbolic acid is an antiseptic and germicide. When given internally, it is mainly eliminated from the system by the urine, and it therefore acts directly on the bacilli. It also increases the flow of urine and allays the burning pain during micturition (dysuria). At the same time he uses a mild astringent urethral injection, such as two grains of sulphate of zinc to the ounce of water.

CHLORODYNE AS A PREPARATION OF PRUSSIC ACID.

FROM a medical point of view, and from the relative quantity of morphia that it contains, chlorodyne is more essentially a preparation of morphia than of prussic acid; but the Patent Medicine Vendors' Association lately prosecuted a chemist of Leeds (who sold chlorodyne) on the charge of "selling a preparation of prussic acid without registering the sale." The prosecution fell through, and the magistrate dismissed the case, as not only was the chemical evidence very conflicting as to the presence of prussic acid, but the maker also of the article testified that it did not and could not contain prussic acid, as none was added to this chlorodyne during or after its manufacture by him.

RETIREMENTS FROM THE WARRANT MEDICAL SERVICE.

ABOUT half-a-dozen Military Assistant Surgeons of the Madras Presidency are sending in their papers for retirement. Four of these are far from the age of compulsory retirement under the 55 years order. They are all men who were lent to the civil department, and who have, in consequence of military demands, been returned to military duty. This is a striking proof that the conditions of the Warrant Medical Service are highly unattractive. One of the warrant officers retiring thus early is within short reach of his seniority, and yet cannot make up his mind to remain in the service. When will the Government of India redeem its promise of improving the salaries of Warrant Medical Officers?

A PHYSICIAN MUST ALWAYS TRY TO SAVE LIFE.

IN connection with our recent remarks on this subject, we quote the *Lancet* :—"We cannot admit that even where we cannot relieve pain, we are one whit the less bound to preserve and prolong life. Man is a creature of such possibilities that the prolongation of his life for even a few weeks or months may have great importance, and although 'the laws of the realm may punish Christian men with death for heinous and grievous offences,' it is not yet recognised as part of a medical man's duty that he should take away that which he cannot give back."

P. M. O'S AND THEIR PAY.

WITH the approval of the Secretary of State for India, the Governor-General in Council is pleased to notify that the Principal Medical Officers of the four commands will be granted the rank of Surgeon-Major-General, subject to Her Majesty's approval in each case. It is notified that the con-

solidated salary of the Principal Medical Officer in each of the four Commands will be Rs. 2,200 per mensem.

The Principal Medical Officer of the Madras Army, who has been transferred to the Bengal Command, and the present Principal Medical Officer of the Bombay Command will, however, continue to receive their present rate of pay, viz., Rs. 2,500 per mensem.

CALCUTTA SANITATION. THEORY VERSUS PRACTICE.

SAYS our esteemed contemporary *Indian Engineering* :—"DR. SIMPSON admitted at a recent municipal meeting that Calcutta is yearly becoming 'more unhealthy.'" "It is my duty, (he said) to state that the long delay in the improvement of the sewer system is a great danger to the inhabitants." Everyone living in the city with a nose on him knows that. At the same time, if the Health Officer would condescend to get off his stiffs, and substitute work for theory, much might be done to ameliorate the insanitary condition of the city during the years that must intervene between 1895 and the adoption of a new drainage scheme."

THE DEATH-RATE OF CALCUTTA, AS COMPARED WITH OTHER CITIES.

THE Health Officer of Calcutta, in his report for the quarter ended on 31st March last, appends a comparative statement comparing the death-rate of Calcutta with that of London, Dublin, Glasgow, Madras and Bombay. During the whole quarter Calcutta shewed the highest death-rate. For the week ended 5th January the death-rates were London 17.4, Dublin 27.8, Glasgow 24.6, Madras 36.6, Bombay 28.8, Calcutta 42.9. For the week ended 30th March the rates were respectively 21.1, 47.4, 29.9, 30.2, 33.6, 66.5.

DR. WADDELL ON BUDDHISM.

A NOTABLE contribution to the history of Buddhism, and a work of unique interest, is Surgeon-Major WADDELL's new book, "The Buddhism of Tibet, or Lamaism, with its mystic cults, symbolism, and mythology, and its relations to Indian Buddhism." The author has had the advantage of exceptional privileges in the pursuit of his investigations, and his exposition of the ritual and beliefs of modern Lamaism may be taken as authoritative.

NEW INDIAN AND ANGLO-INDIAN SURGEONS.

The following Indians and Anglo-Indians have obtained the diplomas of L. R. O. P. & S. Edinburgh, and L. F. P. S. Glasgow :—William Scott, India; Henrietta Fraser Trall, India; Cecil Charles Murison, India; Arno Bhushanam Sreenivasa Charry Morrogh, Madras; Kaval Vittal Rao, Madras; Montague Rust, India; Gertrude Mary Hutton, Benares; Walter Hulbert Cox, Ceylon; Augustus John Laurie, Allahabad; Louisa Charlotte Nash, Bombay; Arthur Joseph Williams, Central India; Aloys Bance, Madras; Hermann Casey Venia, India; William Francis Macfarlane, India, Cyril de Vos, Ceylon; Rose Govindu Rajulu, Madras.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

We have pleasure in publishing the names of the following gentlemen who have joined the Association since our last issue :—

Robert James Owen, Asst. Surgeon, I. M. S., Chitral Relief Force, Camp Kanbat.

John Alexis Reardon, D.M.M.C., No. 65, Serangoon Road, Singapore.

Dominic Francis, Asst. Surgeon, I. M. S., Jask Dispensary, Persian Gulf.

M. Abdul Aziz, Senr. Hosp. Assistant, Mon Sing, Siam Boundary, via Mone, Burma.

Medical men and women in all parts of India and Burma who desire to take a share in aiding the advancement of the Indian Medical Association are cordially requested to write to the Editor of the *Indian Medical Record*, and he will gladly send them blank membership forms and prospectuses. We are glad to find many willing volunteers.

SHORT ITEMS.

At a meeting of the Rangoon Hospital Sub-Committee, it was decided to appoint a resident European medical officer to receive Rs. 200 per month and house, plus the salary of his gazetted Government rank. Plans were laid before the meeting for the proposed new General Hospital for Rangoon, which is to cost over eight lakhs.

Says the *Indian Planter's Gazette* :—" Dr. Hindmarsh, the planter's doctor to the Mouzafferpore District, returns from his English holiday next month. Dr. Moorehead, who has been acting for him, has earned golden opinions as an energetic, careful young physician, and should have no difficulty in picking up a decent practice after giving over charge."

The Inspector-General of Hospitals, Dr. Ross, has been advising H. H. the Lieutenant-Governor of Bengal that there is room for economy among the compounders and dressers of the Mayo and Howrah Hospitals, and among the menial servants of the Sukea Street Dispensary, and Sir Charles Elliott agrees with him.

The report of the lunatic asylums of Bengal shows that in 20 per cent of the cases, lunacy was traceable to ganja smoking. This is at variance with the finding of the Hemp Drugs Commission. But of course, ganja yields revenue, and who will dare to slay the hen that lays the golden eggs!

The Maharaja of Patiala applied for a European medical officer to carry out a thorough investigation into the fevers from which his subjects suffer almost every rainy season. Surgeon-Major Ronald Ross, of Madras, has been selected, and Patiala bears all expenses.

The Emperor William instructed the Berlin Academy to propose the name of M. Pasteur for the Prussian Order of Merit. Unfortunately the French savant's patriotic conscience is too sensitive, and on being sounded on the subject, he has declined the honor.

A man died the other day in New York after licking an envelope. He was poisoned by decaying animal matter from the glue getting into a sore in his mouth. No poisons are more deadly than those produced by the decay of animal matter.

During the illness of Surgeon-Captain Stalkart, A. M. S., Assistant Surgeon G. O. Forrest takes over medical charge of the Fort Station Hospital, and the troops in the Allahabad Fort, in addition to his other duties.

Mrs. Alice Van Ingen, M.D., Brux., L.S.A. Lond., has been appointed to the medical charge of the Kotah District under the Dufferin Fund Service, on a salary of Rs. 500 per mensem with residence and carriage allowance.

Sir Charles Elliott hopes that the lessons of the recent epidemic "will not be lost upon the Corporation of Calcutta."—a hope which will be widely echoed, albeit somewhat a forlorn one.

The Scotch papers by the last mail contain long notices of the death of Dr. Cleghorn of Strathvillie in Fifeshire, who, with Sir Dietrich Brandis, has the credit of introducing scientific forestry into India. He retired in 1869.

Commend us to Akyab for public-spirited officials. The branch Dispensary there was mainly built by Assistant Surgeon Mung Tha Na, A.T.M., who contributed Rs. 3,000 out of Rs. 8,500 of its entire cost.

The Madras Government has directed that all male leper convicts sentenced to imprisonment shall be confined in the Criminal Ward of the Leper Hospital, Madras.

Surgeon-Major General Robert Harvey, M.D., F.R.C.P., D. S. O. has just had the honor of D.L.D. conferred on him by his alma mater, the University of Aberdeen.

The buildings of Charing Cross Hospital, London, are to be sold, and its School and Hospital are to be rebuilt in the suburbs.

Deputy Surgeon-General Joseph Ewart, M.D., formerly Professor of Physiology in the Calcutta Medical College, and thirce Mayor of Brighton, has received the honor of Knighthood.

Dr. Edwin Hindmarsh, Surgeon to the Tirhut Planter's Association, has obtained the diploma of F.R.C.S. Edinburgh, by examination.

Mr. Silk, C. E., an officer of some sanitary experience, succeeds Mr. Kimber as Sanitary Engineer to the Calcutta Municipality.

The Travancore Government has applied to the Secretary of State for India for a medical Officer to fill the vacancy caused by the death of Dr. Innes.

Mr. B. L. Dhingra of Lahore has passed the final examination in Forensic Medicine and Midwifery for the diploma of L. S. A. London.

It is exceedingly gratifying to the medical profession to learn that Surgeon-Major Robertson, I. M. S., the hero of Chitral, "that brave civilian," is to be knighted.

It is also very pleasing to find that the gallant services of Surgeon-Captain Whitechurch, I. M. S., are to be rewarded with the Victoria Cross.

The number of patients admitted to the Darjeeling Eden Sanatorium last year—349—was smaller than that of any previous year, but the income increased by 16 7 per cent.

Dr. Jogendra Nath Ghose has been elected a Municipal Commissioner for one of the wards of the City of Calcutta.

Dr. Lawrence Fernandez has been elected a Municipal Commissioner for one of the wards of the City of Calcutta.

A General Hospital for contagious diseases for all native troops at Peshawar is sanctioned.

Mr. W. H. Reed of Bombay has passed in Midwifery the Examination for the L. S. A. Lond.

Surgeon-Major J. H. Tull-Walsh, I. M. S., has obtained the diploma of F. R. C. S. Eng.

Mr. Dinsha Rabansha Dalal, of Bombay, has obtained the diploma of M. R. C. S. Eng.

The Viceroy thanked Dr. Robertson personally at Simla for the excellent work done by him during the siege of Chitral.

It is with deep regret we record the death of the Revd. J. L. Phillips M.D., a noble physician and a heroic Sunday School worker. He died last week at Mutucorie from Bright's disease.

Current Medical Literature.

MEDICINE.

The Relations of Variola, Varioloid and Vaccinia.

GEORGE DOCK EYRE, M.D., points out that while the followers of JENNER contend that the vaccine variety of the virus never changes back into that of small-pox, CHAUVEAU, CROOKSHANK and more recent specialists and the majority of observers maintain that vaccinia is only disguised small-pox, which may at any time recover its primitive qualities and produce the more severe disease either in the subject himself or in another person attending him, and then become the starting point of a severe epidemic; and THOMSON and KAPOSI show that varioloid is a mild form of small-pox occurring in both vaccinated and unvaccinated persons. The view that vaccinia is a totally distinct disease from and yet nevertheless protects against small-pox is not often advanced now, as the various epidemics have seriously taught that vaccinated persons may have small-pox in all possible degrees of severity, while there are thousands of instances where unvaccinated persons have exhibited a marked resistance to the infection. This natural immunity may be the result of intra-uterine variolation (DUBREUILH) or of prolonged residence in an infected place (COLIN), but the statistics (1746 to 1821) of the London Small-pox Hospital point out that this immunity varies from 7 to 30 per cent. while WOODVILLE places it at 5 per cent. in adults and 1.6 per cent. for infants and DESOTEAUX and VALENTIN estimate it at 0.1 per cent. for all ages; but most authorities agree that this immunity is easily lost, and persons who have passed unscathed through many an epidemic may succumb at a later period, while JENNER maintained that vaccination afforded permanent protection. BROWN, BRYCE, COPLAND and GREGORY found that the protection diminished gradually after the second year; but KLAMANN (1893) NEUMANN, WITTHAUER and PREIFFER are of opinion that the period may not exceed one year and that even an attack of confluent small-pox does not necessarily protect against the recurrence of the disease.

Even to the present day vaccination fails to protect in thousands of instances, making it a matter of solemn regret that after a full century of investigation and millions of inoculations, the true pathological relation of vaccination to small-pox should be so obscure as to make it a matter of serious doubt, whether small-pox is caused by protozoa, amoebae or rhizopods, or whether the *cytocytes variolae* were spurious instead of genuine parasites; or again, whether the most truth lies in the theory that "the contagium does not change, but the cells of the host cause the effect of the contagium to develop in different ways," as the most eminent bacteriologists of the present day have proven, times without number, that neither vaccination nor re-vaccination nor even a prior attack produces immunity for indefinite periods of time, though variola and the animal poxes mutually representing each other, immunity against one excludes infection from the other, and a single transfer of the virus may cause immunity for some or many years, both against inoculation and against all human or animal variolous diseases, yet the consensus of opinion is that the immunity, real or expected, is by no means uniform or positive in all cases alike, while one and the same infection causes: variola vera, purpura variolosa, variola hemorrhagica, varioloid, varioline and vaccinia in man; horse-pox and equinia in horses; and local cow-pox and vaccinia in kine.

Alimentation in Febrile Disorders.

DR. E. A. DAY points out that patients often die not for the want of proper medication, but from the need of suste-

nance, because in all febrile affections the system often interferes with the proper assimilation of nutriment by bringing about a morbid condition of the salivary, gastric, pancreatic and intestinal glands whose function is to produce the various digestive fluids and ferments, and while there is an increased waste and destruction of the tissues of the body, a vicious circle is formed by the excretories being compelled to do the double work of eliminating the increased tissue waste and disposing of the food which the food that the impaired digestive and assimilative organs are unable to utilize: consequently the system becomes surcharged with effete matter to such a degree as to exaggerate the fever and produce a high disgust for food which is vomited as soon as swallowed, and the stomach practically or absolutely ceasing to be an avenue through which sufficient aliment, to maintain the vital powers through the crisis of the disease, may enter the system the patient dies of exhaustion. Although not enough to be relied upon of itself, he thinks it probable that sufficient nutriment to help the resistance to exhaustion (when stomach feeding is impossible by virtue of deranged digestive powers) can be introduced through the integument; but the case must be closely watched and if necessary, assisted by nutrient enemata.

A Mother infected with Primary Syphilis from her own Syphilitic Child.

COLLES rules that a mother cannot be infected by her own syphilitic child, but a different tale was told by a woman of 31 who, during 13 years of married life, had had 8 children and no miscarriages. Of the 8 children 3 died in infancy; while, with the exception of the baby, the others were in good health. Complaining of ulcers on her breast, she was examined by Senior Assistant Surgeon A. LUCAS, F.R.C.S., who found that the ulcers, which had all the characteristic signs of "hard" sores, were situated about ten inches away from the nipple, and extended nearly two-thirds round the breast. The eight months' baby that she was nursing had snuffles and the *cafe au lait* complexion, condylomata on the anus and in the mouth, there were ulcers that had appeared, when the child was six months old. The ulcers on the mother's breast had appeared a month later, and careful enquiry showed that the infection was from her child, and not from her husband, who was perfectly healthy. She was treated with blackwash and hydrarg. c. creta under which the chancres began to clear up; but a secondary rash appeared on her arms and chest, and she had some pharyngitis. Unfortunately she stopped further treatment and observation by ceasing to attend the hospital.

Acromegaly.

ARNOLD, who attaches great importance to the relation of pituitary and thyroid diseases to changes in the nerve centres, the peripheral nerves and their muscles, inveighs in favor of more experiments towards attaining accurate information. He thinks that the *osteo-arthropathies* associated with or following lung, syphilitic and vascular affections should not be confounded with true acromegaly, which is an independent disease, presenting characteristic muscular and nervous lesions peculiar to itself, and not to be found in any of the others, for instance: All varieties of fibre degeneration of the muscles, hyaline degeneration of the nerve vessels with thickening of the pericellular capsules and pia of the cori, and a thin layer of myelin fibres; vacuolation of some of the nerve cells; obliteration of the central canal of the spinal cord by gliomatous growths; degeneration of posterior roots of cauda and lumbar cord, and in the columns of Goll and the pyramidal tract; enlarged hypophysis; thickened meninges and softening, sclerosis and pigmentation of the brain matter; naked eye enlargement in the cervical sympathetic and the thyroid, which is considerably enlarged, and contains several colloid masses.

Persistent Recurrences of Influenza.

Parkeus tells us that the greater virulence of the pathogenic germ is commensurate with the greater contagion towards producing an epidemic of influenza from which there is apparently no immunity against recurrence, even though nothing occurs in the interval between the different attacks. Looking closely into the matter, he finds that instead of conferring immunity, the first attack of influenza often predisposes the patient to a return of the disease, suddenly and at any time. He has known the disease to attack the same organism from two to four times in a period of from 30 to 120 days, (each time with more or less prolonged intervals of complete apyrexia) and thinks that these repeated attacks should be attributed to a series of autochthonous re-infections in a soil especially favorable to them.

Intestinal Antisepsis in Children.

WHILE laboratory experience teaches that many of the older drugs in which we place most confidence are of service by virtue of their antiseptic properties, DR. J. COMBY points out that the digestive tube is a laboratory of poisons which, under healthful conditions, are eliminated by the natural excretories, and particularly by the kidneys, and if the renal function be impaired, toxic material accumulates in the blood. Without dwelling upon the advantages of buccal antisepsis in various disorders, he points out that in all maladies of the gastro-intestinal canal—from the mouth to the anus—insoluble antiseptics are particularly required in the therapeutics of childhood, and in choosing from drugs of this class, he advocates in favor of benzo naphthol, salol and betol and the salicylate, subgallate and subnitrate of bismuth, supplemented by occasional lavage of the stomach and irrigation of the bowel.

SURGERY.

Methods of Teaching Surgery.

IN these days, when there is a tendency to reduce the time given to systematic lectures and increase the number of the teaching staff to the detriment of obtaining anything like uniformity of views in collateral or sub-divisional subjects, the questions naturally arise as to *what* is to be taught as surgery, *how* it is to be taught, and to *whom*? Considering that students may be divided into three classes: (a) those desiring to be general medical practitioners; (b) those specially fitting themselves for surgical work; and (c) those wishing to learn only as much surgery as will scrape them through the M. D. examination, DR. JOHN S. BILLINGS thinks that a good deal depends upon what the student is required to know of anatomy and pathology before he begins his surgical studies, the time at his disposal and the nature of the final examination, the local condition and the character, tastes, and teaching-powers of the different men who make up the faculty, together with the facilities for laboratory and clinical instruction. Clinical instruction, he admits, would be the best mode of teaching surgery; but, as clinical material is not available to cover the entire field for any school, no matter how large its hospital and dispensaries, systematic didactic teaching must come to the assistance of clinics, and these again must be supplemented by recitations, demonstrations, practical operation on dummies, animals and cadavers in the details of treatment of wounds, bandaging, dressings and major and minor operations; theoretical clinical lectures, illustrated by operations in a well-lighted and properly graded amphitheatre and practical clinical instruction to ward classes in which each student is required to do something in the diagnosis or treatment or both. He urges strongly the necessity for a good

grounding in surgical anatomy and pathology, and while objecting against the present system of lengthy lectures and too many class sub-divisions with consequent waste of time by repeated repetitions of the same preliminary bases, by too many teachers, of hardly necessary splitting up of the subject of surgery into orthopaedic, ophthalmic, abdominal, genito-urinary, *et cetera* surgery, he very rightly points out that as "what the students hear and see during the first half of a lecture is what they will make the best notes of and remember best," the lecturer should *do* in his mind the half-hour dozen questions or so that he would put to test the student's knowledge of the subject he is going to speak on, and then proceed to explain (*i.e.*, answer) these questions as clearly definitely and fully, and in as few words as are compatible with making the object in view understood and appreciated. Another good plan is, to from time to time test the knowledge acquired by the class by suddenly picking upon any one of the students to lead a debate by his class mates on any portion of the subjects previously lectured on and requiring him (or those who differ from his views) to give reasons for the statements he makes.

Cardiointesis, Endocarditis and Pericarditis with effusion. Accidental tapping of right Ventricle after apparent death: Recovery.

LAST May, a fairly healthy young lady, aged 19, had a severe attack of erysipelas, which had apparently yielded to iron and applications of ichthyol and lanoline; but on the 5th day a severe attack of rheumatic fever suddenly developed. The temperature, which varied from 99° to 103°F, showed a distinct tendency to an evening rise, and the pulse, which was of fair strength, regularity and volume, varied from 100 to 116 per minute, but a well-marked friction was audible over the whole base of the precordial area, and she complained of persistent effusion about the chest. She was given large doses of salicylate of soda, and sinapisms and warm poultices were applied locally, under which the 'friction' abated and the fever decreased, but there was no diminution in pain. On the 24th day there were occasional attacks of sickness; swallowing was difficult, movement of lower limbs caused excruciating agony; pulse became feeble, dicrotic and varied, from 120 to 140 per minute; respirations reaching 30 to 50 per minute; irritable hacking cough; cardiac dulness greatly increased; friction was still audible, but the heart sounds were distant, feeble and obscured, and she grew worse hourly. On the 32nd day the pulse suddenly slowed down to 80, then becoming uncountable and almost imperceptible, together with other symptoms of approaching death; 30 minims of ether were injected into her arm and a second 30 into her left breast, but as the heart and respiration suddenly stopped, DR. ALLEN T. SLOAN jumped up, seized the aspirator and plunged the needle into the 4th interspace, a little to the left of the sternum, and a trifle below the left nipple, when to his horror 8 or 10 ounces of pure blood gushed into the aspirator bottle (then suddenly stopped) and shewed him that he had accidentally penetrated a cavity of the heart. Thinking "all was over," he was about to withdraw the cannula, when the heart suddenly re-asserted itself in the race for life and the patient seemed to recover from a painless death to die one of terrible agony, considering her screams and sufferings. She was kept well under the influence of ether, then injected with $\frac{1}{4}$ grain of morphia, absolute rest was enjoined with liquid feeding in the shape of strong soups flavored with vegetable juices, bowels moved by glycerine enemata, and on the 51st day she was pronounced convalescent.

Splenectomy.

THOUGH practically a modern operation, splenectomy dates back to the sixteenth century, when ZARCAINI made the first unsuccessful total extirpation in 1549, and FERRERIUS obtained similar results in 1711, while DIXON, writing in 1738, speaks emphatically of a "society of surgeons" who acquired notoriety by "wauling" their patients (*wult* meaning spleen), but it was not till 1867, when PEAN removed an enlarged cystic spleen from a young woman that the operation was accorded a place in legitimate surgery. FRAUOLINI (1881) was the first and only one who (ever) successfully extirpated a spleen for leucæmia; but AGNEW (1889) maintains that all cases of hypertrophy, whether simple, malarial, or leucæmic, are excluded from the realm of operative surgery, yet RIGGERS (1892) is the only successful extirpator for a subcutaneous trauma of the spleen. Though the indications for splenectomy have not been definitely settled and removal of the spleen for cystic disease gives an excellent record, most authors advise preliminary incision and drainage, and think that in all cases it is better to tap and drain than to extirpate the spleen. DR. W. J. CONKLIN declares that while it is unjustifiable to operate when the white blood corpuscles are in excess or in leucocytæmia or other conditions with extensive enlargements of the lymphatic glands, splenectomy is directly indicated in movable or displaced spleens; severe traumatism with or without an external wound; prolapse of the spleen into a parietal wound; protrusion after injury; tumors, simple hypertrophies and other splenic enlargements that have resisted most other measures—and though the shock may be profound or the hemorrhage profuse, the danger may be averted and sepsis guarded against by prompt, quick and clean work, and in any case total removal of the spleen is certainly preferable to mere replacement or operative fixation.

Filling the Roots of Decayed Teeth.

To fill a tooth and leave a vent (*i.e.*, rhizodontology), declares MR. EDMUND OWEN, is to only roll a stone over a whitened sepulchre, as dead teeth exist in two conditions, in one of which the root membrane is healthy and in the other it is not. In the first group the cavity of decay having been excavated, the root canals and pulp cavities are thoroughly cleaned, rendered aseptic, dried and immediately filled with some indestructible material, at the one sitting; but in the other group the filling must be delayed until the diseased condition of the root membrane has been removed by both constitutional treatment as well as by the judicious application of strong antiseptics, such as hydrogen peroxide or corrosive sublimate, after which the cavities can be cleaned and effectually plugged with permanent filling. Whereas to fill a decayed tooth that is charging pus either through a fistula or via the pulp canal, or to try to establish drainage by drilling into the pulp cavity, is utterly opposed to surgical principles, as the vent which forms the outlet, also forms an inlet while sealing up the outlet, or a discharging sinus, or an actively carious tooth may be attended with immense danger to the patient.

The Implantation of an Artificial Testis after Castration.

BEING compelled to castrate a man 37 years of age for tuberculous involvement of both testes, DR. R. F. WEIR tried to humour his request "to not completely remove the right testis" by, (at the close of the castration), resorting to an expedient to relieve his mental anxiety. Thoroughly removing the whole of the diseased right testis and scraping the left one, he implanted on the right side in the half-vacant scrotum, a properly disinfected ball of celluloid of one inch diameter and closed and sutured the scrotal wound. Healing promptly followed and the patient has worn this artificial testicle

since May 1899, without complaint. DR. J. B. BARNES reports a similar case in which, however, gutta serena takes the place of the celluloid.

To see Cataract in your own Eye.

Drive a pin hole through the middle of a visiting card, and holding the flat surface of the card towards the light in the direction of a piece of blue sky, place the eye close to the hole and look through, when you will see a fairly large but faintly illuminated field or *clear* disc should your eye be normal, but if you have a cataract, it will be projected upon the field. In this manner you can delineate your own cataract, watch its progress, and decide whether you will have it operated on; for by looking through the hole in the card, as writes J. S. in *Knowledge*, you are in reality observing the shadow cast by your cataract on the retina at the back of your eye.

OBSTETRICS AND GYNECOLOGY.

Treatment of Endometritis.

DR. BACON's method of meeting its indications consists in:—
(1) Removal by curettage, drainage, irrigation or swabbing of gravidital or menstrual decida which afford soil for bacteria and their toxins and secretions (2). Destruction, (after curettage of outer portion of the endometrium), of pathogenic agents by direct application of caustic or strong antiseptics, (3) Stimulation, by massage, with Dolores's ecovilon or ordinary applicator swab, of the bactericidal and resisting properties of the tissues. (4) Stimulating nature's antiseptic properties by improving the circulation, controlling the distended capillaries and arteries, emptying the lymph-channels and removing the exudations and extravasations of serum and blood; but it is difficult to correctly understand how nature exerts this antiseptic power, whether by phagocytosis, antitoxin of blood serum or any other cause.

Rules for introduction of Instruments into the Uterus.

Do NOT, advises DR. C. S. BACON, examine a patient at her first visit, but teach her how to use the vaginal douche with corrosive sublimate for 3 or 4 days, after which—
(1) Wash your hands and instruments thoroughly with an antiseptic. (2) Treat her external genitals and the surrounding skin likewise. (3) Thoroughly scrub every part of the vaginal walls with liquid soap and then wash out with a solution of lysol or creolin. (4) Introducing a NEUGERBAUER speculum scrub the cervical canal first with liquid soap, then strong creolin solution, and lastly alcohol. (5) Never introduce an instrument without seeing the cervical canal; and if immediate examination be necessary, do so either in a hospital or at her own home with all the preparatory details of an aseptic surgical operation.

Hemophilia at the onset of Menstruation.

OLIVIER has reported the case of a girl, thirteen years old, who had just menstruated for the first time, the discharge at first being slight, but subsequently becoming so profuse as to threaten life. All other measures failing, the vagina was tamponed and the flow was moderated. Upon the removal of the tampon, at the end of twenty-four hours, the hemorrhage was resumed with its previous freedom. Vaginal injections of hot water were employed and followed by the introduction of a tampon, but without success.

Upon consultation, the conclusion was now reached that the girl was a hemophilic. It was learned that when a child, she had fallen, injuring the head, and a large ecchymosis had formed beneath the scalp. The removal of teeth at different times had also always been followed by free bleeding.

The following plan of treatment was outlined: 1st, vaginal injections, at a temperature of 122°, every two hours; 2nd,

If the hæmorrhage persisted, gaseous-oestria, intra-uterine application; of 50 milliamperes, followed by a tampon; 3rd, treatment directed toward the general condition, especially alcohol, in some form; 4th, the hourly administration of hydrastisina. In this way it was hoped to control the immediate bleeding. The question also arose as to its repetition in the future. The removal of the ovaries in the hope of obviating such repetition was contra-indicated by the danger of fatal hæmorrhage from the operation.

The after-treatment of Laparotomy.

DR. BRICKEK (Wursburg) said that formerly opiates were invariably given after laparotomy, but that at present even laxatives were prescribed in order to remove pyogenic bacteria and their products. Opiates should not be given after simple operations, but they were useful in cases where the intestines were irritated or loosened during the operation; also when symptoms of slight ileus appeared opiates should be tried at first, and if the symptoms did not disappear very soon the peritoneal wound should be opened up. Hæmorrhage and peritonitis after the operation also require the peritoneum to be re-opened.—*Lancet*.

Vaginitis in Children.

TINCTURE of belladonna, 1½ fluidrachms (8 grammes); spirit of nitrous ether, 3 fluidrachms (12 grammes); Cammorrated tincture of opium, 5 fluidrachms (16 grammes); tincture of buchu, sufficient to make 3 fluidounces (90 grammes). Mix. Dose: Half a teaspoonful, increasing to a full teaspoonful, in a little water, every two or three hours. Give 20 to 30 grains (1·3 to 2 grammes) sodium bicarbonate after each meal, with flaxseed-tea or other demulcent drinks.—HOMER C. BLOOM, Philadelphia Polyclinic.

Death from and after Post-Partum Hæmorrhage.

TARNIER teaches that flooding after the application of the forceps must always be expected, since the instrument is usually employed because of uterine inertia, a source of hæmorrhage. The danger comes when the placenta is expelled. TARNIER, when called to apply the forceps for a colleague in private, used to leave before the delivery of the placenta. In consequence he was very often called back. He makes these observations in respect to a robust woman who suffered from uterine inertia, and was delivered by forceps. There was considerable flooding, but not so much as to lead to expectation of bad results. The patient went to sleep, but awoke a few hours later and complained that she was suffocating. There had been no fresh hæmorrhage. She very soon died. At the post-mortem examination miliary tubercle was found disseminated in abundance over the lungs, pleura, liver, and spleen. There was no evidence of insufficient blood in the system, no embolism, and no blood retained in the uterine cavity. The previous flooding, quite insufficient to harm a sound constitution, proved enough to kill this patient. Yet externally she looked healthy. We must be slow, says TARNIER, to find fault with a colleague for losing a patient after flooding. Had the above case occurred in private, and no necropsy held, the obstetrician would certainly have incurred more blame than he deserved.—*B. M. J.*

Uterine Hæmorrhage.

DILATE the uterus without *okloroform*, curette, and pass a fenestrated sound into the uterine cavity, containing a metal tube of small calibre. Connect this with an apparatus giving off steam at about 212°F. (100°C.), turning off the steam in one minute, when hæmostasis will be complete. The patient feels no pain, the part becomes insensative, fœtor is destroyed, and the mucosa membrane is covered with a thin albuminous pellicle.—ZACHARIN, *Univ. Med. Jour.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Dead Brain Action.

A CURIOUS case reported in a contemporary recently opens up a number of most interesting psychical problems. The patient, a Welshman, forty-seven years of age, appears to exist, like Messrs. JERTIL and HYDE, in two separate and distinct states of consciousness, the right and the left brain exerting alternately a preponderating influence over the motor powers. In the two mental conditions, which are very marked, the patient speaks a different language, English or Welsh. In the English stage he is right-handed and is presumably using the left cerebral hemisphere; he writes, talks, and understands English only, is restless and mischievous, bold, fierce and fairly intelligent, and appears to be the subject of chronic mania. In the Welsh stage he becomes left handed, and is probably using the right cerebral hemisphere; he writes and speaks, and understands Welsh, but not English; he is shy and suspicious, does not know coins or tobacco, of which he is very found in the English stage, and he is clearly in a condition of dementia. Sometimes the one stage seems to merge gradually into the other, and in this intermediate condition he can use both hands equally well and employs both English and Welsh words. The man lives, it seems, two separate existences, but the mental impressions of each existence are recorded in one cerebral hemisphere only, at a time. It would almost appear, therefore, from this case that each hemisphere has the power of acting independently of the other, and that in health, the customary co-ordination in movement is the result of education and experience, rather than of any controlling influence of one side of the brain over the other.—*Lancet*.

Decomposition in the Intestines.

POHL has shewn that milk, and HINSCHLER that carbohydrates, diminish the amount of fermentation in the intestines; WINTERNITZ, however, thought that the milk diet acted chiefly by means of carbohydrates contained in it; ROVIGHI, on the other hand, that its efficacy lay in the lactic acid.

SCHMITZ estimating the fermentation in the bowel by the amount of ethereal sulphuric acid passed in the urine, found that milk sugar had no effect in dogs. Fresh cheese, which contains a very small quantity of carbohydrate material, checked the intestinal decomposition of protekis very vigorously; in fact, in one experiment the putrefaction appeared to be nil. What constituent of the cheese had worked this wonder? It could not be its antiseptic action, for it had none. It was not the casein, for pure casein had no effect. The cheese sterilised, acted as strongly as before, it therefore was not due to the organisms contained in it. He concluded that it must have been the small quantity of carbohydrate contained in the cheese. Observations on men gave the same result.

IN another experiment he found that in men HCl by the mouth decreased intestinal putrefaction; in dogs it had no effect. That is to say, that in dogs a state of hyperacidity is present, increase of which does not affect the organisms ingested, while in men HCl is required to be given to give the gastric juice a bactericidal action on those organisms which flourish in the intestines.—*Practitioner*.

Accessory Spleens.

ALBRECHT shewed a specimen before the Vienna Society of Physicians, in which there was an enormous number of accessory spleens. These seldom exceed thirty to forty, but in this case there were countless numbers, some being only the size of a pin's head and the largest that of a hazel nut, except in the normal position of the spleen, where there was one as big as a walnut, having a splenic artery and vein arising in

the normal position. The most remarkable point was that they were not confined to the mesogastrium, which is the generally accepted site for the development of the spleen, but were present over the whole peritoneum (for example, on the convexity of the liver). They had a normal splenic structure, but in some there was a great quantity of pigment. The specimen was taken from a patient, aged 25, who died of chronic parenchymatous nephritis. No such case has been reported.—*B. M. J.*

Diagnosis of Diabetes and Glycosuria by Examination of the Blood.

DR. BREMER describes a modification of EHRLICH's method of staining cover-glass preparations of blood with eosin and methyl blue. By this method of staining, in normal blood the red blood-corpuscles appear brownish red, but the color varies from a clear reddish brown to a deep chestnut brown (*The British Medical Journal*). The nuclei of the leucocytes stain blue. BREMER found that in diabetes and glycosuria the red blood-corpuscles either remained completely unstained, or they were simply tinted light yellow or greenish yellow. Only occasionally a small peripheral zone of the red corpuscle was tinged slightly red. Other minor changes were found in the leucocytes. With acid fuchsin and other so-called acid dyes, the red corpuscles of diabetic blood stained just in the same manner as those of normal blood. It was only eosin which did not stain them. In order to determine whether this loss of staining affinity for eosin was due to the abnormal amount of sugar in diabetic blood, BREMER treated cover-glass preparations of normal blood with a solution of sugar. But he found that the red corpuscles still stained with eosin, as in normal blood. If, however, a cover-glass preparation of non-diabetic blood was floated for twenty-five to thirty minutes in a diabetic urine, the red corpuscles failed to stain brownish red with eosin; they remained unstained or were only slightly tinted yellow or greenish yellow, as in diabetic blood. But the red corpuscles in a cover-glass preparation of non-diabetic blood, treated with urine free from sugar, stained well with eosin. In glycosuria produced artificially by the administration of phloroglucin for three days, the red corpuscles failed to stain with eosin, as in diabetes.—*N. Y. Med. Rec.*

Gonococci in the Vaginal Secretions.

BUTNER, in the space of three months, examined fifty-four prostitutes of Dorpat, to ascertain whether or not they were affected with blennorrhagia. Of these, thirty-two were subjected to a semi-weekly examination through the speculum; the other twenty-two were encountered in the hospital. Of these latter, in only six did microscopic examination shew the presence of a blennorrhagia. In eleven of the remaining sixteen, or 68 per cent., bacteriologic examination shewed the presence of the gonococcus in the vaginal secretion and the same result in nine, (28 per cent.), of the prostitutes registered by the police. Among the prostitutes under treatment in the hospital, BUTNER made a separate examination of the vaginal secretion, the cervical mucus, and the secretion from the urethra. In the eleven women with manifest blennorrhagia he never found the gonococcus in the vaginal secretion. This microbe was found six times in the cervical mucus and the urethral secretion at the same time; four times in the secretion from the urethra only; once in the cervical mucus only. The author concludes that the examination of prostitutes, as it is practiced at present, does not give sufficient basis for the establishment of a certain diagnosis.—*N. Y. Med. Jour.*

A new variety of the *Bacillus Anthracis*.

CHAUVEAU AND PHILALIA, in experimenting on guinea-pigs with cultures of the *bacillus anthracis*, attenuated

by the action of compressed oxygen, have discovered cultures disclosing a new variety of this microbe, which they name the *bacillus anthracis claviformis* because of its key-like or bell-clapper-like form. This organism is permanent and specific in its form, and physiologically is distinguished by its total want of virulence in all but very large doses. It also possesses only the feeblest immunitary power, and neither this nor the original virulence of the anthrax bacillus can be restored to it by the usual procedures.—*B. M. J.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The origin of Hospitals.

IN contradiction of the claim that hospitals were exclusively the result of Christian teaching, GATEWOOD forcibly points out that BERDET proved that as early as B. C. 400, medicine had reached a very high degree of perfection in Egypt, but being confined to the priests only, who carefully guarded the secrets of the healing power, it became almost a "lost art" for many years after the conquest of Egypt, and the wholesale destruction of her temples and priesthood. Warlike Sparta had hospitals attached to her training schools in B. C. 800; and in Athens and India, where medicine and religion sailed yard and mast, we frequently read that in B. C. 600 to B. C. 500 large hospitals were raised in the form of temples and shrines, where the sick presented offerings to the gods and put themselves under the care of the priests. During the earlier days of the Christian church, the care of the sick was the special duty of the Christian clergy, and from CHARLEMAGNE'S time to A. D. 800 monasteries and hospitals were synonymous but gradually separating and developing independent of each other, the term "hospital," as it is now understood, is of comparatively recent date. From A. D. 600 to 1750 is recorded as the period of Auto-da-Fe, demoniacal possession and witchcraft while from A. D. 1750 to 1850 is designated as the period of brutal suppression, cruelty and ill-treatment, and it is only lately that hospitals were built where systematic treatment could be obtained. With the strides that medicine is at present making, the time is not far distant when lunatic asylums shall cease to be mere detention houses for those mentally unsound, and properly conducted hospitals will be opened where the insane person shall be a patient as truly and surely as the one who is suffering from bronchitis, typhoid, syphilis, &c.

Individual responsibility in the prevention of the spread of infectious disease.

WHILE charging the grand jury at Patterson N. Y. Assizes, Judge DIXON informed them that the United States Laws provided the criminal indictment as a public nuisance, of any person who (a) knowingly communicates a contagious disease to another; (b) recklessly endangers the health and lives of others by carrying about with him the germ of a contagious disease; (c) spreads the disease by conscious exposure thereto of others by his presence in public places. If death occur through such carelessness, he may be indicted for manslaughter; but whether any consequences follow the above offences or not, he may be indicted and punished as a public nuisance for endangering the public health.

Remuneration of Medical Witnesses.

SOME seventy years back, when a guinea had nearly eight times the commercial value it now represents, the daily fees arranged for medical witnesses, who were required to give evidence, were:—Treasury prosecutions 3 guineas, Police Court 11 shillings, Sessions or Assizes 4 guineas, Coroners Court 21 shillings, besides first class passage; 3 shillings

for eight years, although, for every night he remained away from home. Though the fees hold the same, the travelling allowance is struck down to second class, and the Sunday, interlocking staffing, and eight ministrations are disallowed. The Police Surgeon's Association, we are informed, contemplates bringing these matters before the Home Secretary, pointing out that while the *Crown* pays very inadequate fees to its witnesses, it cannot engage to secure the best talent; and what it orders as payment, is more than frequently a mere trifle compared with what is offered to medical witnesses for defence. We wish the Association every success, and suggest that its proposals might be extended to India also.

An Automatic Gallows.

THE new hanging machine that is to be tested at Connetquot is so built that the moment the condemned criminal steps on the lethal platform his weight sets in motion the necessary machinery for his suspension. The employment of the apparatus has been protested against by some persons who argue that the man thus executed is virtually a suicide, and the STATE has not the right to abet a *felio de se*.

—:O:—

THERAPEUTICS AND PHARMACOLOGY.

The Madar Plant and its Properties.

ACCORDING to the observations of J. H. BRIDGEMAN, this plant has marvellous properties, and is pretty largely used by the natives of India: *Nice* grains of the dried and pulverised root, given four times daily, and accompanied by a dose of castor oil on alternate days, may be considered a specific in dysentery; the oil obtained by boiling equal parts of the dried root and mustard oil together for an hour, forms a curative anodyne liniment for rheumatic and other pains, while the lesser roots are used as tooth brushes (*mis-wach*) for strengthening the teeth and gums and averting tooth-ache. The leaves are heated on an iron pan and then tied on to affected parts to assuage pain. The flowers are used as a specific in fever. The milky juice that exudes from any part of the living plant when bruised, is useful in bringing blind boils to a head and bursting them; it is used both internally and externally in splenic fever and certain forms of eczema, and is recognised as a powerful remedy in toothache, when in addition to removing the pain, it appears to have the property of eradicating a loose tooth and of strengthening a firmly fixed one.

Quinine as a Preventive of Malaria.

AT the instance of the Paris Therapeutic Society, a committee was named, a few weeks ago, to establish, for the benefit of the military authorities, the most preferable forms of administering salts of quinine as a preventive for malaria. The committee reports as a preventive, basic hydrochloride of quinine as the preferable salt, its solubility being sufficient, and, as it is richer in alkaloid, it is less irritating to the digestive organs than the sulphate. Hydrobromide appears preferable in troublesome fevers on which the hydrochloride has not had any effect. Quinine should not be used in a compressed form. Soluble pills or perles, in a gelatine envelope, appear to be the best preparations. Pills or perles, each containing 25 centigrammes of hydrochloride of quinine, can be given in doses of two per day—one in the morning, and the other in the evening—with a little water or other liquid.—*Chem. and Drug.*

Constipation in Infancy.

HOLT states that the normal stools in infancy usually contain 30 to 40 per cent. of fat; infant's food must contain much more fat than can be absorbed. If cream, containing 18 per cent. of fat, is substituted for a portion of the cow's milk, the stools usually become softer. Milk-sugar has little

or no effect in relieving constipation. KALM, of New York, considers that massage, although resorted to, is a valuable measure for the relief of constipation. It should be practised on an empty stomach, and should consist in small, circular movements made with the tips of the fingers along the course of the ascending, transverse, and descending colon. The conventional position at stool is often responsible for rectal constipation. YALE is not quite sure that the habitual use of enemata causes chronic constipation. STARR has used with much satisfaction a suppository containing extract of belladonna and purified oleum mixed with codon-liver.—*The Med. News.*

Treatment of Uremia.

RENAUT, in treating uræmia, endeavours to overcome the renal impermeability by the application to the loins of leeches, which he greatly prefers for this purpose to wet cupping. He demonstrated in 1888 the anastomoses which exist between the subcutaneous blood vessels of the loins and those of the cortex of the kidney. Inhalations of oxygen may be of use in aiding the blood to oxidise the retained toxic products. To increase the circulation in the kidney, the muscular substance of the heart must be stimulated, and for this purpose RENAUT prefers the administration every four days of 1 milligramme of crystallised digitalin, to be continued even after the renal obstruction has been removed. A milk diet, although it usually increases the daily amount of albumen secreted in the urine, is to be preferred on account of its diuretic action, and because it is a diet yielding very little toxic residue. During the uræmic attack subcutaneous injections of ether act as a cardiac stimulant, and to some extent render the nervous system insensible to the action of the toxic agents of uræmic origin.—*B. M. J.*

Pilocarpine in Alcoholism.

IN alcoholism, DOCTOR JOSHAM recommends one-third grain doses of pilocarpine hypodermatically, and declares "its sobering effects are remarkable; sleep ensues, and the patient wakes up a perfectly rational being. The tense, red, bloated countenance and bleared, congested eyes pass away, the features become calm and easy, the skin soft and clear.—*Proc. Med. Jour.*

Solvents for Quinine Sulphate.

CROUZEL considers sulphuric acid objectionable as a solvent for quinine sulphate on account of its disagreeable taste, its action on the mucous membrane, and its interference with the digestive fluids and ferments. He considers tartaric and citric acids free from these objections. For hypodermatic injections the best proportions for dissolving one gramme of quinine sulphate are: 20 centigrammes of tartaric acid or 40 centigrammes of citric acid, in 120 grammes of distilled water.—*Bulletin of Pharmacy.*

A Rhubarb Draught.

| | | | |
|-------------------------|-----|-----|----------|
| R. Pulveris rhei ... | ... | ... | gr. xxx. |
| Sodii bicarbonatis ... | ... | ... | gr. xx. |
| Spiritus myristice ... | ... | ... | ℥xx. |
| Syrupi zingiberis ... | ... | ... | 3j. |
| Aque floræ aurantii ... | ... | ad | ℥iiss. |

Misce et fiat haustus.

To be taken at bed-time.—*Med. Bulletin.*

For Vomiting of Pregnancy.

DR. GOODALL sometimes made use of:—

| | | | |
|---------------------|-----|-----|----------|
| R. Cerri oxalat ... | ... | ... | gr. j. |
| Ipecacuanha ... | ... | ... | gr. j. |
| Cressoti ... | ... | ... | gtt. ij. |

M. Sig.—To be taken every hour until nausea is controlled.—*Pacific Med. Jour.*

Correspondence.

"LUMBRICUS IN GRAVEL."

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I must apologise for the injustice I have done Dr. BRITTO in assuming he was humorously inclined. The levity of my letter must have sorely jarred upon his deep earnest convictions. I shall endeavour to look at the subject with all the reverence due to a new discovery.

Dr. BRITTO accuses me of that which he is really guilty i.e., of jumping at conclusions. He also states that I condemn without a trial. I retort, he advocates without "having had an opportunity of testing his supposition in any single case."

Let me examine for a moment the basis on which he propounds this new departure in practical therapeutics. On a memorable fishing excursion of loving memory an idea struck him. Unlike the venerable Archimides on a no less memorable bathing excursion, he cries "Eureka"; not on the spur of the moment, but after many years. In a word, looked at by the light of after-times, some unfortunate earthworms lay in a shell, imbedded in mud. A night passed over; and lo and behold! the mud had disappeared. Lumbricus had a dainty dinner and lay asleep wrapped in a mantle of mucus. This, bereft of the language in which it is dressed, is Dr. BRITTO's observation. How many a thoughtless school-boy disciple of amiable ISAAC WALTON has had a like experience! But the practical and useful lesson therefrom was left to Dr. BRITTO to unfold. He says "this led me to think that left, these worms possess properties, antilithic and dissolvent of gravel and urinary calculi."

Sir, I fail to understand the process of reasoning. The observation does not lead to any such conclusion, and experience does not confirm it. With admirable sang froid Dr. BRITTO foretells a brilliant future for his offspring, and views in fancy's mirror the leading scientists and chemists vying with each other for the honor of preparing the "Extractum Lumbricus Terrestis". It is immaterial to Dr. BRITTO in what form the worm is served for the therapeutical repast. He wisely leaves the onus of clinching his observations by experience, to other physicians, and is content to wait.

In an admirable article of a few issues back, you, Sir, deplored the tendency of young doctors to dabble in new and potent drugs to the exclusion of old and tried medicaments. I wish I had the ability to follow in the steps of Dr. NORMAN KERR and denounce in as forcible language the habit daily spreading to an alarming extent, of the use of those self-same new and potent drugs by the lay and ignorant public. Dr. BRITTO will excuse me if I frankly state my inability to test the efficacy of the treatment he advocates, till he places before the profession a more lengthy and a more logical exposition of his observations, deductions and his own practical experience, than is found in his first letter.

I do not wish to enter into any lengthy and heated controversy with my ancient friend, Dr. BRITTO. I claim your indulgence for this letter, and shall not trouble you further on the subject.

Yours &c., JOS. P. BARBOZA, M.B., C.M.
POLLIBETTA, SOUTH COORRI.

MR. BALM'S CASES OF OVARIOTOMY.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I have to make some remarks on the two clinical ovariectomy reports which were sent for publication to your valuable journal, and which appeared in the issue of the 1st of June.

I observe that the treatment and progress of the cases have been condensed by you, and in doing so a few mistakes appear, which I wish to rectify.

In case No. 2, writing of the description of the operation, you state "The peritoneum was then laid open and the cyst discovered to be adherent to it. The fluid was evacuated from the principal cyst, and it was then found that this cyst was also adherent." I alluded to one cyst only, i.e., the principal cyst. First on making the incisions, owing to tension due to the fluid, it was not conceivable how far the adhesions existed, but on emptying the principal cyst it was clear. As you put it, we understand that a daughter cyst was found to be adherent first and then the principal cyst—which is putting the cart before the horse.

In the treatment "At 5 P.M. the patient vomited and 10 grains of oxalate of cerium were given." I had a singular verb, for I took the powder in one mass. (!)

Again "She slept till 1 A.M. Four ounces of milk were administered at this hour." I had 4 oz. of milk was given her then. (!) As you omitted the dietetic treatment, you might as well have omitted this also. Moreover, the sentence sounds odd, and the giving of the milk "at this hour" implies as if this was a "*sine qua non*" line of treatment.

"An antimony and paregoric mixture was given" instead of were given.

"On the 10th she passed a round worm after the turpentine enema was administered, and thereafter progressed well." It was not the passing of the round worm that made the case to progress but the free action of the enema.

"One suture was removed on the 11th and two more the next day." You don't assign the reason why they were removed. Pus was seen in the wound and to give free vent to it I removed them.

Yours &c., E. M. BALM,
District Surgeon.

PARDHANI, 16th June 1895.

[All we have to say about this matter is that we cannot afford space for lengthy cases giving minute details of their progress: thus at 5 A.M. milk and medicine were given: at 8 A.M. something else, at noon something more, then again at 3 P.M., 5 P.M., 8 P.M. &c. &c. and so on for 10 to 15 days, page by page. As to the grammatical errors readers can judge for themselves.—Ed., I. M. E.]

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THE MEDICAL PROFESSION AND PROPRIETARY MEDICINES.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I read in your issue of the 18th March 1895, that the proprietary medicine trade would never have reached its present gigantic dimensions if medical men and medical journals refused to be gulled into granting commendatory certificates and notices of proprietary medicines. I quite agree with your correspondent, Mr. N. H.

Martin, but the difficulty is that when professional certificates are refused or not obtained, the proprietors get such certificates from non-professional men of respectability; and these, though not carrying any very considerable weight, are equally misleading. I have myself seen the patentee of a *sermo* (antimonial external application for the eyes) going with a sample packet to an Inspector of Schools and asking for a certificate which was, I believe, refused, but the man was successful in gaining his object from several other gentlemen. When refused a certificate, the man was seen to offer presents, e.g., a bag of crystallised sugar, &c. If the giving of extensive series of advertisements and presenting samples to the editors of medical journals are really the means of obtaining flattering notices of proprietary medicines without any reference to the efficacy of the latter, nothing need be said of non-medical journals, and nothing can be more misleading to the public at large.

Yours &c., JAIKISAN DAS, L.M. & S.,
Assistant Surgeon, Kulu, District Kangra.

THE EXTERNAL USE OF ACONITE ROOT.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Will you kindly give some space in your valuable journal to the following? The external use of aconite root has been found very useful by me in relieving pain and subsiding the swelling of the lymphatic glands, particularly those of the groins and axillæ. My mode of applying it is very simple. I get a root of aconite and rub it with a little water on some stone. When the water becomes turbid, I apply it on the swelling and advise the patient to use dry fomentation over it in addition. Many cases have been cured who came under my treatment before their buboes were ripe. I give details of one case which came under my treatment last month:—A young man by name Sukh Ram, was suffering from sympathetic buboes of both groins. On examining, I found them very much swollen and painful, I advised him to apply aconite root and dry fomentation over them. By this treatment he got some relief from pain on the first day and within a fortnight all the swelling subsided. The fomentation was carried out by means of a heated brick wrapped up in a piece of cloth. The native names for aconite root are: *Muthia telia*, *Telia bikh* or *bish*, and the hill men of this place call it *Mohra*.

Yours &c., THANA RAM,
Hospital Assistant.

SIMLA.

HOSPITAL ASSISTANTS' UNIFORM.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Can you let me know if Hospital Assistants are permitted to wear "M" on their shoulder straps and the black "tab" on their collars? In the Madras Presidency some wear only "M," others the twisted gold cord, and a third section wear both the M and the tab. I do not see any mention made of the above departmental badges in Appendix I, A.R.I. Vol. VI. I would also like to know what are the Regulation color and pattern of boots allowed to be worn by Hospital Assistants when in *khaki* dress, as the Regulations are silent on this point.

Yours &c., BROAD BRIM.

[We believe no one ought to go outside the regulations. Ammunition boots are always uniform.—Ed., I. M. R.]

W. M. O'S. COLORS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I would call your attention to the Editorial remarks *anent* a letter from me to yourself dated the 16th August 1893, in which matter up to date, as far as I am aware, no measure has been settled upon for general adoption.

Yours &c., A. BEALE,

Assistant Surgeon, R. I. M. S. Clive.

PORTSMOUTH, 24th May 1895.

REVIEWS.

PRACTICAL MANUAL OF DISEASES OF WOMEN AND UTERINE THERAPEUTICS *for students and practitioners.* By H. MACNAUGHTON-JONES, M.D., M.C.H., M.A.O. (Hon. Caus.), F.R.C.S.I. & E., Examiner in midwifery and diseases of women and children in the Royal University of Ireland, and Lecturer on Surgical and Descriptive Anatomy, Queen's College; Consulting Surgeon to the Maternity and to the Women and Children's Hospital, Cork, &c., &c. Sixth edition, revised and enlarged. London: BAILLIERE, TINDALL & COX, 20 and 21, King William Street, Strand. 1894. Illustrated. Pages 766. Price 12s 6d.

This most notable work on gynecology by such a mature and experienced writer as Dr. MACNAUGHTON-JONES needs but little of the *labor limæ* to render it perfect. A work that has reached its sixth edition needs no critic to handle it. It speaks for itself. All we can do, therefore, is to point out the many excellent addenda made in the present edition and compare it generally with the one immediately preceding it.

The work has gone through the six editions in the comparatively short period of 10 years, and during this time such rapid strides have been made in the clinical, pathological and operative departments of GYNECOLOGY that frequent alterations had to be made in the previous editions, while the present one has had to be re-written, re-arranged and re-illustrated. Considerable additions have been made also, in the pathological and surgical portions; new chapters having been added on *Uterine reflexes*, *Sutures and ligatures*, *The Surgical treatment of uterine fibromata*, *Affections of the Fallopian tubes*, *Tubal pregnancy*, and *Ovarian affections*. To make room for these additions, the chapters on Diseases of the Mammary Gland have been omitted, as also certain minor topics. The book still maintains its usual small bulk. Names of authorities quoted, are fully acknowledged and appended in list form. The illustrations are numerous, well-executed and explain the text admirably. A number of them appear in this new edition for the first time.

As a work intended for students and practitioners, Dr. MACNAUGHTON-JONES's Manual of Diseases of Women and Uterine Therapeutics has been written in a thoroughly concise and practical manner, presenting the latest advances in gynecology and the most recent researches in therapeutics thereanent. Dr. MACNAUGHTON-JONES has to be congratulated upon the marked success that has attended the publication of his work. It will, no doubt, prove as popular as, (if not more so than), the editions which have preceded it. The moderate price for such a complete

fitly, handy compendium will place it within the reach of all. The printing, binding, paper and finish of this volume are of the highest order.

THE BOOK OF PRESCRIPTIONS: containing *apocrypha* of 3,000 prescriptions, collected from the practice of the most eminent physicians and surgeons, English and Foreign. Comprising also a compendious history of the materia medica, lists of the doses of all official or established preparations, and an index of diseases and remedies. By **HENRY BEASLEY**. Seventh Edition. London: J. and A. CHURCHILL, 11, New Burlington Street. 1892. Pages 599. Price 7s. 6d.

This well-known and extensively read little formulary of pharmacology is now in its seventh edition. This fact coupled with the wide reputation enjoyed by "Beasley's Prescriptions," amply justify the inception of another edition. Many alterations and additions are made in the present edition—e.g., the nomenclature of certain substances has been changed to suit the scientific terms in vogue at the present day. For instance, names of drugs ending in *a*, are now altered to *ii*; such as *sodæ bicarb.* into *sodii bicarb.*, *potassæ bicarb.* into *potassii bicarb.*, &c. The alkaloïds now terminate in "*ina*" in Latin, and "*ins*" in English—as *strychnina*, *strychnine*; *quinina*, *quinine*, &c. In writing prescriptions of *fluid* drugs, \mathfrak{ss} and \mathfrak{ij} are now altered to simply the $\frac{1}{2}$ (ounce) and $\frac{1}{4}$ (drachm). We need not dwell at any length on the virtues and excellences of the little compendium before us. The fact of its extensive utilization speaks more eloquently than could the reviewer's pen as to its usefulness, and the compact, terse, complete nature of its contents. As the busy physician's *vade mecum* and a book of handy and ready reference in times of difficulty, it would not be easy to find its equal.

The little volume opens with a list of the signs and abbreviations used in prescribing, and a list of Latin words and phrases, which is very complete and helpful. Then follow the drugs, in alphabetical order, each drug is shortly described, giving its properties, solubility, dose and uses, after which a number of prescriptions follow from some of the most eminent physicians and surgeons illustrative of the various modes of exhibiting the medication in question, the ailment for which it is prescribed being added in italics; lastly there is appended an index of diseases with appropriate remedies prescribed for each.

The little treatise may well be styled, "The Physician's friend." We can most heartily commend its being adopted as a daily companion.

CATALOGUE OF SURGICAL INSTRUMENTS AND APPLIANCES: manufactured by **Messrs. ARNOLD AND SONS**, 81 West Smithfield, and 1, 2, & 3, Giltspur Street, London, E. C. 1895. Pages 818.

We have before us, beautifully bound in cloth boards, the latest issue of **Messrs. ARNOLD & SONS'** excellent catalogue of Surgical Instruments and Appliances. The very name of **ARNOLD** on a Surgical implement is a guarantee of *first class* quality, and English manufacture. This firm is a very old established one, having been founded in 1819, and is a very *versatile* for all kinds of surgical require-

ments. The catalogue is a most comprehensive and complete one, consisting of 818 pages, and is probably most exquisitely illustrated with woodcuts. A copious index, in alphabetical order, prefaces the work.

Messrs. ARNOLD & SONS are always ready to adopt any suggested improvements in instruments, or carry out original ideas. They employ only the most experienced **ENGLISH** workmen, and the very best material in their factory and can thus guarantee every article manufactured by them, which is thoroughly tested and examined before being sold. Their Orthopedic appliances are especially good and well-finished, and combine strength with lightness—a great desideratum. Their manufacture of Artificial Limbs has also received especial attention and care. Considering the superior quality of goods turned out by them, **Messrs. ARNOLD & SONS'** prices cannot be regarded other than moderate.

We have, however, in the present review, to do more with their catalogue than the *Firm per se*. The possession of such a well-printed and well-illustrated volume is in itself a most useful acquisition, and must have cost the Firm and their collaborators much time and labour to produce such a first class price-list, in every way a worthy exponent and index of the prestige and good standing of **Messrs. ARNOLD & SONS'** Establishment, the *recherché* style of which, has already obtained a world-wide renown. We congratulate them on their past successes and honors, and trust that the large share of patronage enjoyed by them at present, may be increased a hundredfold.

Government Medical Gazettes.

GOVERNMENT OF INDIA.

Surgn. Lieut.-Col. D. P. MacDonald, M.D., Sen. Med. Offr., Port Blair, has obtained priv. leave for sixty-eight days from the 1st August.

The undermentioned Surgn.-Lieuts. apptd. to Bombay Estab. reported their arrival at Bombay on dates specified:—Samuel Evans, 21st April; James Haldane MacDonald, 6th April.

Surgn.-Col. James Cleghorn, M.D., to be Surgn. Maj.-Genl., 29th March.

Brig.-Surgn. Lieut.-Col. John Henry Newman, M.D., to be Surgn.-Col., 29th March.

Brig.-Surgn. Lieut.-Col. James Charles Gordon Carmichael, M.D., to be Surgn.-Col., 29th March.

MADRAS SUBORDINATE MED. ESTAB.—Senr. Asst. Surgn., with honorary rank of Surgn.-Lieut., George Albert Waite, to be Senr. Asst. Surgn. with honorary rank of Surgn.-Capt., 12th Jan.; First class Asst. Surgn. Charles Robert Heneaud to be Senr. Asst. Surgn. with honorary rank of Surgn.-Lieut., 12th Jan.

The Queen has approved of the retirement from service of the undermentioned officers:—

BENG. MED. ESTAB.—Surgn. Maj.-Genl. William Roche Bice, M.D., C.B., 29th March; Brig.-Surgn. Lieut.-Col. Archibald Cameron, M.D., 1st April.

MADRAS MED. ESTAB.—Brig.-Surgn. Lieut.-Col. James Smith, 1st April; Surgn.-Maj. Donald Bleum, M.D., 10th March.

Surgn.-Majs. Arthur Henry Coles Dane, M.D., John Philip Greany, M.D., George Edward Elton Burroughs James McCloghry to be Surgn. Lieut.-Cols. after completing 20 years' full pay service from 31st March.

Surgn.-Capt. Mackintosh Alexander Thomas Oddie, M.D., and William Henry Quicke to be Surgn.-Majs. after completing 12 years full pay service, 31st March.

Surgn.-Maj. S. J. Thomson, I. M. S. (Beng.), Depy. Sany. Commr., is apptd. to be Sany. Commr., N.-W. P. and

Order with effect from date on which he assumed charge of office as Brig.-Surgn. Lieut.-Col. G. Hetchum, M.D.

Samuel Neville Ellis and Francis John Sullivan, after passing final exam., are admitted into service as 3rd class Asst. Surgns. from 6th June.

Surgn. Lieut.-Col. to be Brig.-Surgn. Lieut.-Col.—Christopher William Oakthrop, M.D., vice Brig.-Surgn. Lieut.-Col. J. H. Newman promoted.

William Alexander Crawford Roe, *vice* Brig.-Surgn. Lieut.-Col. J. C. G. Carmichael, M.D., promoted.

SUR. MED. ESTABL.—First class Asst. Surgn. James Kelly to be Senior Asst. Surgn. with hony. rank of Surgn.-Lieut.

Second class Asst. Surgn. Cecil George Stanley Jenkins to be 1st class Asst. Surgn.

Third class Asst. Surgn. Charles Horace Wachsel to be 2nd class Asst. Surg. from 2nd Jan., *vice* Senior Asst. Surgn. and Hony. Surgn. Lieut. C. Atkins, deceased.

Third class Asst. Surgn. William John Gillson to be second class Asst. Surgn. from 14th Jan., *vice* 2nd class Asst. Surgn. C. E. H. Cornelius, deceased.

Third class Asst. Surgn. Joseph Seymour Herring to be 2nd class Asst. Surgn. from 19th April, *vice* 2nd class Asst. Surgn. G. D. Coleman, dismissed.

Third grade Asst. Surgn. Harman Doss, having passed prescribed exam., is promoted to 2nd grade from 6th May.

BENGAL GOVERNMENT.

Asst. Surgn. Umes Chunder Banerjee is allowed leave for six months.

Surgn.-Maj. Dharmadas Basu reported his departure from India, on furlough, on 2nd May.

Mily. Asst. Surgn. A. E. DuBois held sub. *pro tem.* appt. of med. offr. at Sandheads from 20th March to 11th April.

Asst. Surgn. Nobin Chunder Dutt, of Sadar Dispy., at Darbhanga, held med. charge of civil station of Darbhanga, in addition to his own duties, from 25th to 28th March and from 5th to 17th April.

Asst. Surgn. Preembar Mitter is apptd. to do superny. duty at Med. Coll. Hosp.

Asst. Surgn. Khirde Chandra Chowdhuri is apptd. to do superny. duty at Med. Coll. Hosp.

Asst. Surgn. Chuni Lal Nandi, a superny. at the Presdy., is apptd. to have tempy. med. charge of Hutwa Raj Dispy. in Baran Dist. during absence of Asst. Surgn. Ramana Krishna De, on tour with Maharaja.

Asst. Surgn. Akshoy Kumar Nandi, a superny. at Med. Coll. Hosp., is apptd. on probation as an additional Asst. Surgn. in Chemical Examiner's Dept.

The services of Surgn.-Maj. E. F. H. Dobson, M.B., I.M.S., (Beng.) are replaced at disposal of Chief Commr. of Assam, from date on which he was relieved of his duties as Offg. Protector of Emigrants and Supdt. of Emigration, Calcutta.

Mily. Asst. Surgn. W. A. Williams, civil Med. Offr., Balasore, is apptd. to be civil Med. Offr. of Jalpaiguri, *vice* Dr. J. L. Hendley transferred.

Dr. J. L. Hendley, civil Med. Offr. Jalpaiguri, is apptd. to be Civil Med. Offr. of Balasore, *vice* Mily. Asst. Surgn. W. A. Williams, transferred.

Having passed the prescribed Exam. 2nd grade Asst. Surgn. Khirde Chunder Roy is promoted to 1st grade from 1st May.

Asst. Surgn. Satyabari Chatterjee is allowed leave for six months.

First class Asst. Surgn. James Kelly to be Senr. Asst. Surgn. with honorary rank of Surgn.-Lieut. from the 2nd Jan. 1895, *vice* Senr. Asst. Surgn. and Hony. Surgn. Lieut. C. Atkins, deceased.

PUNJAB GOVERNMENT.

Second class Hosp. Asst. Saadat Ali, from Syndwala to Kamalia Dispy., Montgomery Dist., which he joined on 18th May, relieving 1st class Hosp. Asst. Sahadat Ali.

First class Hosp. Asst. Sahadat Ali, from Kamalia to Syndwala Dispy., Montgomery Dist., which he joined on 24th May.

First class Hosp. Asst. Basm Chand, Rawalpindi City Branch Dispy., was deputed to charge of Masro Dispy., Rawalpindi Dist., from 3rd to 11th May, during absence of Asst. Surgn. Harman Das at Lahore to attend Septennial Exam. of Asst. Surgns.

Third class Hosp. Asst. Goverdhan Das, Civil Hosp., Rawalpindi was deputed to Nurpur Fair to Rawalpindi Dist., from 4th May to 18th May, when he reverted to Rawalpindi Civil Hosp.

On being recalled from priv. leave granted to him in Punjab Gazette, Med. Dept., 1st class Hosp. Asst. Badrud-din resumed charge of Pakpattan Dispy., Montgomery Dist., on 21st May.

Third class Hosp. Asst. Khair-ul-din, Pokoe Hosp., Dera Ghazi Khan, has obtained three months' priv. leave, and was relieved of his duties on 20th May by 3rd class Hosp. Asst. Tufel Ram, Jail Hosp., Dera Ghazi Khan, who held charge in addn. to his other duties.

The extraordinary leave without allowances granted to Asst. Surgn. B. C. Ghosh in Punjab Gazette Med. Dept. is extended by 13 months.

Asst. Surgn. Daulat Ram, doing genl. duty at Jullundur, was deputed to Bhadarkali Fair at Niaz Beg, Lahore Dist., from 18th to 21st May. He rejoined Jullundur Civil Hosp. for genl. duty on 22nd May.

On termination of priv. leave granted to him in Punjab Gazette Med. Dept., Asst. Surgn. Kali Nath Mai was apptd. to do genl. duty at Mayo Hosp., Lahore, from 11th May.

On return from priv. leave granted to him in Punjab Gazette Med. Dept., Asst. Surgn. Krishna Chandra resumed charge of Gujrat Dispy. on 20th May, relieving Asst. Surgn. Sohin Karm Singh.

First class Hosp. Asst. Ghulam Rasul, from Mardan Dispy., Peshawar Dist., to Rahon Dispy., Jullundur Dist., which he joined on 12th May, relieving 1st class Hosp. Asst. Kifayat Ulla Khan.

First class Hosp. Asst. Kifayat Ulla Khan, from Rahon Dispy., Jullundur Dist., to Phillour Police School Hosp., Jullundur Dist., which he joined on 14th May, relieving 1st class Hosp. Asst. Bishan Das.

Third class Hosp. Asst. Nathe Khan, from Indri to Arnault Dispy., Karnal Dist. which he joined on 17th May, relieving 1st class Hosp. Asst. Abdul Rahim.

First class Hosp. Asst. Abdul Rahim, from Arnault to Indri Dispy., Karnal Dist., which he joined on 22nd May.

First class Hosp. Asst. Mohsan Ali, at present attached to Ballabgarh Dispy., Delhi Dist., having passed English Qualification Exam. is entitled to higher rate of pay of his grade, from 17th April.

Surgn.-Maj. M. O'Dwyer, Civil Surgn. Jullundur, has obtained furlough on (m. c.) in India for three months, from 26th May.

Asst. Surgn. Sobha Ram, in charge of Jullundur Civil Hosp., is apptd. to offc. as Civil Surgn. of that station, in addn. to his own duties, from 26th May, *vice* Surgn.-Maj. M. O'Dwyer, proceeding on leave.

Local student Jowahir Singh having passed final exam. of Lahore Med. School, is admitted into service of Govt. as a 3rd class Hosp. Asst. from 10th May, and apptd. to do genl. duty at Mayo Hosp., Lahore.

The leave granted to Asst. Surgn. Girdhari Lal in Punjab Gazette Med. Dept. is extended by seven days.

On return from priv. leave granted to him in Punjab Gazette, Med. Dept., 3rd class Hosp. Asst. Ganga Bishen resumed charge of his duties on Chenab Canal, Gujranwala Dist., on 22nd May.

First class Hosp. Asst. Pir Bakhsh, Bannu Dispy. and Bannu Jail and Police Hosp. has obtained one year's leave (m. c.) and was relieved of his duties on 31st May by Asst. Surgn. Parshotam Das, Imperial List, transferred from Mooltan.

The following exchange of appts. was made in Dera Ismail Khan Dist. in interests of public service:—

Second class Hosp. Asst. Nawab Khan, from Gomal Pass to Kulachi Dispy., which he joined on 19th May.

-3rd class Hosp. Asst. Dasanul Khan, from Kulachi to Gomai Pasa Dispy., which he joined on 17th May.

Second class Hosp. Asst. Suchet Singh, doing genl. duty at Gujarat, to N.W. Railway, Amritsar, which he joined on 31st May, relieving 1st class Hosp. Asst. Abdul Rahman, granted one month's priv. leave.

On return from priv. leave granted to him in Punjab Gazette, Med. Dept., dated 26th March, 3rd class Hosp. Asst. Sheikh Ahmad was apptd. to do genl. duty at Rawalpindi on 19th May.

Third class Hosp. Asst. Sheikh Ahmad, from Rawalpindi to Gogranwala for genl. duty from 31st May.

Asst. Surgn. Sodhi Karm Singh, doing genl. duty at Gujarat, to Civil Hosp. Amritsar, from 31st May, relieving Asst. Surgn. Mehr Chand II, Rai Bahadur.

Asst. Surgn. Har Narain, from Lahore Central Jail to civil Hosp., Delhi, for genl. duty, from 29th May.

Third class Hosp. Asst. Lohoria Ram, from Pakpattan Dispy., Montgomery Dist., to Sheikh Budin Dispy., Dera Ismail Khan Dist., which he joined on 27th May.

Second class Hosp. Asst. Umar Chand, at present in charge of Miani Dispy., Shahpur Dist., having passed English Qualification Exam, according to test laid down in G. G. O., is entitled to higher rate of pay of his grade from 17th April.

Asst. Surgn. J. D. Rebelro, doing genl. duty at Lahore, is apptd. to med. charge of Sheikh Budin from 18th May.

Senior Asst. Surgn. J. Barker is transferred from Hissar to Rohtak Dist. as Civil Surgn., and assumed charge of his duties on 3rd June, relieving Asst. Surgn. Fattah Chand, M.B.

Asst. Surgn. Fattah Chand, M.B., Offg. Civil Surgn., is transferred from Rohtak to Hissar, where he assumed charge of his duties on 3rd June.

Asst. Surgn. Ramji Lal, Hissar Dispy., held charge of civil med. duties of Hissar Dist., in addn. to his own duties, from 31st June.

MADRAS GOVERNMENT.

Surgn.-Maj. Sarkies Carrapiet Sarkies to act as Surgn. third dist., Madras, during absence of Bridge-Surgn. Lieut.-Col. H. J. Hazlett.

Surgn.-Capt. William Molesworth, M.B., to act as additional med. offr., Genl. Hosp., Madras, during employment of Surgn. Capt. R. Robertson, M.B., on other duty.

Surgn.-Maj. John Smyth, M.D., to act as Fort Surgn. with Port and Marine duties, during absence of Surgn. Lieut.-Col. H. Allison, M.D., on leave.

Surgn.-Capt. Gerald Godfray Giffard to act as Resid. Med. Offr., Genl. Hosp., during employment of Surgn.-Maj. J. Smyth, M.D., on other duty.

The services of the undermentioned officers of Indian Med. Service (Madras), are placed temply at disposal of Govt. of Madras:—Surgn.-Capt. W. Molesworth; Surgn.-Capt. C. Donovan.

BOMBAY GOVERNMENT.

Asst. Surgn. Nilkant Dayabhai, L.M. & S., is allowed leave (m. c.) for one year from 22nd March.

Surgn.-Capt. John Blackburn Smith and Asst. Surgn. Mancherji Jamsaji Mistri respectively delivered over and received charge of Shikarpur Prison on 28th May.

Surgn.-Maj. R. J. Baker, M.D., I. M. S. (Bom.), Resdy. Surgn. and ex-officio Asst. to Political Resdy. in Turkish Arabia, is apptd. to offce. as Med. Offr. of 2nd Regiment, Central India Horse, and of Western Malwa Political Agency from 3rd May, and during absence on leave of Surgn.-Capt. C. M. Moore.

CENTRAL PROVINCES GOVERNMENT.

Second class Civil Hosp. Asst. Ujagar Parshad, doing duty under orders of Civil Surgn., Wardha, is apptd. to Jail and Police Hosp., Wardha.

On being relieved by Civil Hosp. Asst. Ujagar Parshad, 3rd class Civil Hosp. Asst. Balwant Laxman, attached to Jail and Police Hosp., Wardha, is directed to do duty under orders of Civil Surgn., Nagpur.

Third class Civil Hosp. Asst. Waman Daji, doing duty under orders of Civil Surgn., Nagpur, is directed to do duty under orders of Civil Surgn., Bhandara.

Third class Civil Hosp. Asst. Raghunath Panchal, doing duty under orders of Civil Surgn., Jabalpur, is directed to do duty under the orders of Civil Surgn., Saugor.

Third class Civil Hosp. Asst. Ramkrishna Patilaji, doing duty under orders of Civil Surgn., Nagpur, is posted to Jail Hosp., Sambalpur.

On being relieved by Civil Hosp. Asst. Ramkrishna Patilaji, 3rd class Civil Hosp. Asst. Govind Deo Rao, attached to Jail Hosp., Sambalpur, is posted to Police Hosp., Raipur.

Brig.-Surgn. Lieut.-Col. John Henry Newman, M.D., to be Surgn.-Col. from 29th March.

First class Civil Hosp. Asst. Anwar Ali, doing duty under orders of Civil Surgn., Nagpur, is granted twenty-one days' priv. leave from date he may be permitted to avail himself of it.

On expiry of three months' priv. leave granted to him, 3rd class Civil Hosp. Asst. Bhagirath Parshad is directed to do duty under orders of Civil Surgn., Nagpur.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Lieut. W. Young, M.B., C.M., I. M. S., (Beng.), to offce. as Supdt., Central Prison, Bareilly.

Surgn.-Capt. H. E. Drake-Brockman, Civil Surgn., 2nd class, whose services have been replaced at disposal of this Govt. by Govt. of India, Home Dept., to Muttra Dist.

Surgn.-Maj. E. S. Brander, Civil Surgn., from Muttra to Sitapur.

Surgn.-Maj. C. C. Vaid, Civil Surgn., from Sitapur to Haridol.

Mily. Asst. Surgn. E. P. Clement, Offg. Civil Surgn., from Haridol to Oral.

Surgn.-Capt. D. W. Scotland, Offg. Civil Surgn., from Oral to Azamgarh.

The following 3rd grade Asst. Surgns. of Provincial Staff of N.-W. P. and Oudh, having successfully passed septennial professional exam., are promoted to 2nd grade from 1st May:—

Lalta Prasad, Rajendra Nath Chaudhri, Ranjit Singh Sarin.

The services of Surgn.-Capt. H. E. Drake-Brockman, Civil Surgn., Muttra, are placed temply at disposal of Govt. of India, Foreign Dept.

BURMA GOVERNMENT.

First grade Hosp. Asst. Shaik Haldiat Ali, proceeding on three months' priv. leave, relinquished charge of Civil Hosp., Toungoo, on 21st May.

First grade Hosp. Asst. Nurruddeen relinquished, as an addnl. duty, charge of Civil Dispy., Letpadan, Tharrawaddy Dist., on 26th May.

First grade Hosp. Asst. Gobardhan relinquished charge of Ry. Dispy., Dabein, Pegu Dist., on 23rd May and assumed charge of Ry. Dispy. Myittha, Kyaukse dist. on 27th May.

Second grade Hosp. Asst. P. Thoymonsawamp Pillay, on transfer to Shwedaung, Promé Dist., relinquished charge of Jail Hosp., Thayetmyo, on 26th May.

Third grade Hosp. Asst. Raj Chander Barma is granted and extension of leave (M. C.) of eight days.

Third grade Hosp. Asst. Raj Chander Barma, on return from leave (M. C.) assumed charge at Jail Hosp. Thayetmyo, on 26th May.

Third grade Hosp. Asst. Anath Pundu Mukerji, on return from priv. leave, assumed charge of Civil Dispy. Letpadan, Tharrawaddy Dist., on 26th May.

Third grade Hosp. Asst. Shaik Hosan relinquished, as an additional duty, charge of Ry. Dispy., Myittha, Kyaukse Dist., on 27th May.

Third grade Hosp. Asst. Shaik Abdul Rahman, on availing himself of leave without allowance, for one year, relinquished charge of Jail Hosp., Moulmein, on 31st May.

Third grade Hosp. Asst. Chandra Shekora Roy relinquished charge of Police Hosp., Katha, on 22nd May and assumed charge of Jail Hosp. Moulmein, on 31st May.

Second grade Hosp. Asst. Sher Mahomed, on retransfer to Mily. Dept., relinquished charge of Civil Dispy., Shwedaung, Promé Dist., on 31st May.

Second grade Hosp. Asst. P. Thoymonewany Pillay assumed charge of Civil Disp., Shwagun, Prome Dist., on 31st May.

Second grade Hosp. Asst. P. Thoymonewany Pillay assumed, as an additional charge, duties of Supdt. of Sand Operations, Shwagun, Prome Dist., on 31st May, vice 2nd grade Hosp. Asst. Shat Mahomed.

Third grade Hosp. Asst. Abdool Wahid relinquished charge of Outpost Hosp., Nanyaseik, Mogaung sub-divn., on 15th May and assumed charge of Outpost Hosp. Pinka, Mogaung sub-divn., on 18th May.

Third grade Hosp. Asst. U. C. Chackerbutty relinquished charge of Outpost Hosp., Shwagu, Bhamo Dist., on 8th May, and assumed charge of Police Hosp., Bhamo, on 9th May.

Third grade Hosp. Asst. U. C. Chackerbutty relinquished charge of Police Hosp., Bhamo, on 17th May and assumed charge of Outpost Hosp., Shwagu, Bhamo Dist., on 18th May.

Third grade Hosp. Asst. Poromannand Mohapatra relinquished charge of Outpost Hosp., Paungbyin, Upper Chindwin Dist., on 24th May, and assumed charge of Police Hosp., Kindat, Upper Chindwin Dist., on 25th May.

Third grade Hosp. Asst. Tijmul Hussain relinquished charge of Police Hosp., Catha, on 21st May, and assumed charge of Outpost Hosp., Mohnyin, Katha Dist., on 26th May.

Third grade Hosp. Asst. Shaik Abdul Majid, on transfer to Kindat, Upper Chindwin Dist., relinquished charge of Civil Disp., Mahlaing, Mefkila Dist., on 30th May.

Surgn.-Capt. A. R. P. Russell made over, and Surgn.-Capt. C. N. Bensley, M.B., assumed, executive and med. charge of Rangoon Central Jail on 5th June.

G. O. C. C.

Surgn.-Col. W. T. Martin, M.D., leave (M. C.) for six months.

Surgn.-Col. A. Stephen, M.B., Offg. Prinl. Med. Offr., Assam Dist., is confirmed in that appt.

Surgn.-Col. J. C. G. Carmichael, M.D., Offg. Prinl. Med. Offr., Presdy Dist., is confirmed in that appt. from 2nd May.

ASSAM GOVERNMENT.

The services of 1st grade Hosp. Asst. Karam Ali Hazarika are dispensed with from 23rd May.

Third grade Hosp. Asst. Mahim Chandra Datta, a superny. in Goalpara Dist., is apptd. to med. charge of Rupsi Disp. in that Dist. from 27th May.

Asst. Surgn. Atul Chandra Rai, in med. charge of Coolie Depot at Tezpur, is apptd. temply. to hold civil med. charge of Nowgong Dist. during absence, on priv. leave, of Hony. Surgn.-Capt. J. McNaught.

Babu Baikuntha Chandra Purkayastha, a passed student of Dacca School of Medicine, is apptd. on probation for six months, as Civil Hosp. Asst. in Assam, and is posted to Gauhati for duty as a superny. from 5th June.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Re. 1 for subscribers and Re. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

ELKINS.—On 13th June, at Parel, the wife of Asst. Surgn. A. H. Elkins, of a son.

FORSYTH.—On 8th June, at 4, Elysium Row, Calcutta, the wife of W. Forsyth, F.R.C.S.E., of a daughter.

PRICE.—On the 5th instant, at Bungagora, the wife of J. Dods Price, District Medical Officer, Nowgong, Assam, of a son.

MARRIAGE.

MACNAB—DIXON.—On the 20th June, at St. Saviour's, Thandesi, Hazara, Surgn. Capt. Allan J. Macnab, I.M.S., Q. O. Corps of Guides, to Honoria, eldest daughter of Lieutenant-Colonel L. Deering, D.S.O., Commanding 36th Panjab Infy.

DEATH.

CASSIDY.—On 14th June, at Parnes, Coolin Park, Glasgow, son of Surgn.-Capt. and Mrs. C. Clemens Cassidy, aged four months.

NOTICES TO CORRESPONDENTS.

HINTS TO CONTRIBUTORS.

1. Write plainly and briefly and to the point. 2. Write on one side of the paper only. 3. Save postage by sending your papers by "Book Post," the wrapper having its sides open. 4. Every member of the Profession in India should do his little share in adding to the general stock of knowledge of tropical disease. 5. Write up interesting cases or a series of cases, give statistics bearing on the history, causation, prevention and treatment of disease. 6. Bear in mind that this Journal is a channel of communication between the members of our profession in the East; therefore send "Personal and General News items," and they will be recorded. 7. Write your views on socio-political topics, connected with the profession, official and non-official, in order to advance the interests of all sections of our calling. 8. Newspapers and journals sent for notice should have the parts intended for observation marked.

J. W. (Madras) "wishes to know if the Government gold medal, awarded to the best Hospital Assistant in the annual examination of the Madras Medical College, may be worn by its winners, and the color of ribbon that may be worn with it." College medals are not usually worn on the breast, nor would we suppose they could be worn on uniform.

Broad Brin says it is seven months since his war medal rolls were submitted, and that he has not yet received his medal.

J. K. D. (Sultanpore).—1. A Government Medical Officer is not entitled to any fee when called upon to give evidence in a Court of Law on behalf of the State. 2. He can claim all travelling and "out of pocket" expenses incurred. 3. For professional services rendered privately he is always entitled to his fees.

P. R. (Simla).—Your report is with us, and will soon be published.

A. K. C. (Gwalior).—We shall be glad to see you and to do all we can for you.

M. A. A. (Mon Asing).—Thanks for your paper, it will have early attention.

An enquirer.—There is no departmental difference made as regards promotions, &c., in the various grades of Assistant Surgeons, no matter what their qualification may be. Vacancies are filled by selection in the civil department.

C. F. P. (Melbourne).—The Medical Act of Victoria has been received, and we thank you for it. Your request with regard to your diploma will receive our best considerations. Join the Indian Medical Association without delay, particulars of which you will find in the Record.

C. A. T. (Tellicherry).—Your matter is dealt with in this number.

A. K. (Bharat).—Pill-pots with equal parts of tincture of belladonna and tincture of iodine, support the toothless, without any biting suspender and give quinine with rhubarb-pill morning and evening.

M. L. Larna (Lahore).—Same charge as Hospital Assistants.

S. W. C. K. (Bander).—Your reports are received, and will receive early attention.

K. G. S. P. (Kamjur).—Many thanks for your paper.

A. L. M. (Jalpaiguri).—Your cases have been received. Many thanks.

H. M. (Dishat).—Thanks for your paper.

A. V. M. K. (Bombay).—Your letter will appear in an early issue.

M. A. J. (Siara).—Later on.

Job.—Thanks for your letter.

Civil Apothecary (Madras).—The matter is under consideration. Have a little patience.

W. E. L. (Kyaukpyn).—Your case can be published without official reference.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjina Tibabat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Scalpel—The Practitioner—Medical Missions.

Gazettes of the Governments of India, N.-W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam.—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine.

Books.—*Practical Manual of Diseases of Women and Uterine Therapeutics for Students and Practitioners.* By Macnaughton-Jones, M.D., M.B., M.A. (Hon. Cant.), F.R.C.S. & L. (Publishers: Baillière, Tindall and Cox, 20 and 21, King William Street, London). Price, 12s. 6d.

The Book of Prescriptions. By Henry B. ...
Tubers: J and A. ...
Price 7s. 6d.

Catalogue of Surgical Instruments and Appliances, manufactured by Messrs. Arnold & Sons, 51, West Smithfield, and 1, 2, and 3 Giltspur Street, London.

Literary Contributions and Letters from: Surgeon-Patrick Behr, M.D., F.R.C.S., F.A.C.S., D.F.P., Hyderabad; T. M. Shah, Junagadh; Dr. Lawrence Fernandes, M.D., L.R.C.P. & S. (Edin.), L.S.A. (Lond.), L.M. (Bel.), Calcutta; Edward Balin, District Surgeon, Hyderabad; Surgeon-Maj. Henry Gally; Asst. Surgeon B. E. Ghoshala, F.R.C.S. (Lond.), Bombay; John Morton, M.D., Mussoorie; A. Fermie, L.R.C.P. & S. (Edin.), Garo Hills; Civil Hosp. Asst. Agia Ram, Murree; Jos. P. Barbosa, M.B., D.S., South Coorg; Jalkian Das, L.M. & S., Kangra Dist.; Hosp. Asst. Thana Ram, Simla; Asst. Surgeon A. Beale, Portsmouth, and others.

DISPOSAL OF RUBBISH IN RANGOON.

THE labours of the Special Committee appointed as far back as 1893, to investigate this vexed question, have just been concluded. Of the four alternative schemes for disposal of town refuse, namely, destruction by incinerators, removal by rail, removal by water, and burial within Municipal limits, the last has been recommended as the cheapest. The Chief Commissioner, in reviewing the report, and impressed by the advice of one dissenting member, Surgeon-Colonel Baker, expresses regret that a permanent scheme was not arrived at. He also doubts whether any Member of the Committee can regard the scheme advocated in any other light than a temporary arrangement, and accepts it as such pending the proposal for a permanent scheme. It will now rest with the Committee, guided by their past experience, to decide on a final solution, pending the improvement of Municipal finances. The Chief Commissioner, as at present advised, thinks that the most satisfactory permanent method will be to remove the refuse out of town by rail, as rubbish depots in town must be limited. He considers it premature to decide against incinerators. Under the present scheme the rubbish from the western portion of the town will be buried at Ahlone, and that from the eastern portion near the slaughter-house.—*Indian Engineering.*

A PRECAUTION IN THE TREATMENT OF CONJUNCTIVITIS.

The surgeon should always exclude the possibility of GLAUCOMA (after careful examination), before instilling atropin in the eyes of any patient presenting symptoms of acute conjunctivitis, with chemosis, photophobia, &c. Without such precaution, the results would probably be disastrous.

The chief indication of the presence of Glaucoma is, of course, the extreme tension of the globes. Along with this there is the "steamy" condition of the cornea, which is often anæsthetic. The pupil is dilated and fixed. The patient complains of "foggy" vision and sees colored rings surrounding lights at a distance. There is also present a good deal of headache, nausea, vomiting, &c., which are often overlooked and ascribed to a "bilious attack." Hence in patients complaining of headache, vomiting, and rapidly diminished vision, the probability of GLAUCOMA should be suspected.

ORIGINAL ARTICLES.

SOME DIFFICULT CASES OF CHLOROFORM ADMINISTRATION.

BY ARTHUR NEVE, F.R.C.S. (Edin.)

Surgeon, Kashmir Mission Hospital, C.M.S.

THE fact that for all practical purposes ether is not available as an anæsthetic in India should enable the profession here to regard the chloroform controversy from an unbiased stand-point. Here it is not a matter of choice for ether cannot be kept; but it is not reasonable to declare that because chloroform is the only available general anæsthetic in India, therefore it is the best in a cool climate. Nor, if it could be proved that it is absolutely safe in this country, should we settle the controversy in that way. India could contribute two important facts, which perhaps may be elucidated. First, the relation of race to anæsthetics, and this might include the question of racial habits, such as vegetarian diet and abstinence from alcohol. Secondly, the effect of temperature and altitude upon chloroform anæsthesia. Can any clinical difference be established between the administration to natives of India of chloroform in hot weather with a mean temperature of over 85°F., or in cold weather with a mean temperature of 50° or lower at such stations as these temperatures exist, and does an altitude of 6,000 or 8,000 feet affect the question clinically? These practical contributions to debatable points might reasonably be speedily expected from Indian surgeons. A New Zealand surgeon claims that careful study of cases shews that the aborigines there are less liable to suffer from shock, and that Europeans, if insufficiently anæsthetised, are apt to die from inhibition of the action of the heart. Does Indian experience homologate this view? Could an Indian committee be formed to investigate all fatal cases occurring in this country? I published a case in the *Lancet* in which partial anæsthesia plus shock caused very serious symptoms. It referred to a strong Kashmiri, who required castration for sarcoma of a testicle. Owing to vomiting the anæsthetic was insufficiently administered; and at the moment of applying a clamp to the cord the patient became rigid, as in a tetanic spasm, and the heart's action stopped; the wound ceased to bleed. With difficulty—after inversion, injection of ammonia, and also per rectum of hot water, together with steady artificial respiration—the pulse began to flicker, the chest heaved, and the patient was restored. As he was sensitive to the knife. I then rapidly administered two drachms of chloroform, which the patient inhaled quietly, and the operation was finished deliberately and safely. I am convinced of the importance of this and similar cases. One which I narrated at the meeting of the British Medical Association at Bournemouth has the same lesson. A patient suffered both from severe heart disease and from stone in the bladder. Chloroform was timidly given, and as the staff was inserted, the patient gave a gasp and fainted. He was with difficulty restored to consciousness. A fortnight later I arrived in the town and was consulted. I offered to administer chloroform myself. Two drachms were given and the

operation was begun. As the patient had taken chloroform quietly, all seemed well, and I was asked to assist in the operation, leaving the house surgeon to continue the administration. Scarcely two minutes had passed before the reathing appeared to stop. What was the cause? An overdose? No, for no more chloroform had been added. It was the shock acting reflexly on a heart neither protected by consciousness nor by full anæsthesia. I append two cases of faulty administration that have occurred this year out of over 500 chloroformisations under my care. In both cases I was summoned from an adjoining room where I was operating. In one, a native assistant of considerable experience was operating, while another, who has chloroformed thousands of patients, gave the anæsthetic. When I entered, the patient had been partially inverted, the operator was performing artificial respiration, while the other drew out the tongue with the head back; but observing that the lips were purple, which was evidence of continued action of the heart, I at once put my finger down behind the tongue and raised the epiglottis. Immediately one heard the air rush into the chest, and in less than a minute a sighing inspiration shewed that natural respiration was recommencing. In this case I think an overdose had been given and the tongue had fallen back, and the traction upon it did not suffice to open a flaccid epiglottis. The other case was one in which chloroform had been badly taken, the patient struggling a little and afterwards incessantly spitting. Anæsthesia was pushed to stop this annoying reflex symptom, and the moment it ceased the respiration also stopped and the patient turned pallid. When called in, I lifted him on to the ground with his feet and body up and began artificial respiration; the air entered the chest, but for a few seconds the absolute pallor remained. Then there was a slow, natural inspiration; recovery was slow for a minute, and then, with a heave of the body, vomiting began, and the stomach emptied itself of two pounds of semi-digested rice. Here, as in other cases, the syncope was connected with a full stomach and was premonitory of the vomiting. There were two other cases very noteworthy. One was a woman with a gumma over the thyroid cartilage, with considerable dyspnoea, and a constant spasmodic cough. I administered chloroform myself, and began with a dose of ten minims on a towel. There was a moment of struggle, then she lay senseless, and the operation was begun. Her breathing was almost imperceptible and the pulse thready. No more chloroform was given, and the operation (which lasted about twenty minutes) was completed without a sign of consciousness, but soon afterwards she came slowly round. The other case was that of a lad with very great dyspnoea from the pressure of a goitre, which with each inspiration, was sucked down behind the sternum. As in the earlier case, only a few drops of chloroform were given, Mr. W. F. ADAMS kindly taking charge of its administration. I had well begun the operation when breathing stopped, and also the bleeding, except some venous oozing. No more chloroform was given. The legs were raised and artificial respiration began, &c. I went on with the operation and removed the portions of the goitre resting over the trachea. Still he remained unconscious, with great dyspnoea, owing to the flattened and infantile condition of the trachea, so I proceeded to open the trachea below the cricoid cartilage.

An ordinary tracheotomy tube gave no relief, so I inserted a gum elastic catheter for three inches down the trachea. Shortly after this the patient began to show symptoms of returning consciousness. In both these cases the blood was very venous, and the poisonous effect of the chloroform upon the medulla oblongata was at once manifested even in minute doses. There have been upwards of six thousand administrations of chloroform since 1875, without a single direct or indirect death, in the Kashmir Mission Hospital, though not a year passes without dangerous symptoms occurring in a few cases. We have seen (1) primary syncope from fear, and also from (2) laryngeal spasm; (3) secondary syncope from shock due to insufficient chloroform, and also from a proper dose acting on non-oxygenated nerve centres; (4) tertiary (sometimes secondary) syncope connected with vomiting; (5) apnoea from (a) mechanical causes, (b) spasm of the larynx, and (c) from the toxic action of an overdose (relative or absolute) on the nervous centres. In any of these ways life may be lost. The surgeon must hold clear views on the method of administration, so as to steer as clear as may be practicable in any given case of these various dangers; and he must be prompt to recognise the danger-signals of a dilated pupil, or gasping or stertorous breathing, or change of color in the lips. He must also be thorough as well as prompt in his method of restoration. If he have fewer accidents than his fellows, let him not attribute any special credit to himself, still less apportion blame to his neighbours, for the time may be near when he will himself meet with a fatal case due to idiosyncrasy of the patient.

THE HÆMATOZOON OF CHOLERA.

By SURGEON-CAPTAIN PATRICK HEHIA, M.D.,
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IN the year 1892, I contributed to the *Indian Medical Gazette* an account of a series of special investigations on the discovery of a hæmatozoon in the blood of cholera patients. My paper was accorded the honor of being published as a special supplement to the issue of the 30th April of that year. That paper was in part reprinted in a number of periodicals, and various comments were issued on it. Some described it as a highly important discovery; whilst others expressed their incredulity. Some were generous enough to state that I had mistaken degenerated white blood cells for parasites of an amœboid character. Others again stated that the flagellate organisms described by me were elegant specimens of cotton fibre! These and several other similar remarks represent the greeting which that paper received. Considering that I had been 15 years at microscopical work, and that another paper on malaria, published shortly afterwards, contained a reference to control observations on healthy blood, it is needless to make any further remarks. On the welcome which my contribution to the pathology of cholera elicited since the publication of that paper, I have conducted two separate series of further observations, during extensive epidemics of cholera, but with that

greater attention to detail which further experience engenders, with the result that I have not been able to modify my original observations to any noteworthy extent, or in any essential particular—the main facts then observed have been verified repeatedly.

The present paper, however, proposes to deal with my later observations only, and on this occasion I would confine my remarks to the parasitic organisms met with in the blood, reserving a description of my observations on the dejecta for a later opportunity.

Before entering upon a description of this polymorphic sporozoon, however, I would refer to the general plan upon which the investigation was conducted, and the precautions that appear to be required, to make these observations successfully, and to some extent at least trustworthy. The following paragraphs give briefly, a description of the various phases of my hæmatozoon:—

(1). *Large spherical bodies*, some with granular, others with hyaline contents. They are sometimes surrounded with long ciliary processes of varying length and thickness, all of which move in one direction in a wave-like manner.

(2). *Small spheric cells*, of varying diameter, but usually about half the size of red blood corpuscles, having contents sometimes hyaline, sometimes granular, and possessed of from three to six well-defined ciliary processes growing at right angles from the surface of the body. These are, as a rule, found in considerable numbers, and their cilia are from 2 to 8 *micras* in length, and have a pinkish tinge. It is necessary, of course, to distinguish both these and the following from the blood-plates of Hayem.

(3). *Small amœboid bodies*, with one or two highly refractive spore-like structures in their interior. Whilst they are surrounded by loose soft protoplasm and furnished with from two to five thin flagellate processes, which, when seen with a bright light, have a pinkish tinge, move with considerable rapidity, and vary in length from 1 to 4 or 5 *micras*. These bodies are developed from various forms of large cells, from which they are set free in the process of disintegration. Frequently, however, they are motile, even whilst within the larger or parental forms, in which they gradually approach the border, and make their way into the surrounding fluid, appearing there as the small, free, moving amœboid structures just mentioned.

(4). *Ciliated spherical bodies*, of varying size, are always present in large numbers. In the dejecta they are seen to be developed from medium-sized cyst-like bodies. Sometimes these ciliated spherical bodies rupture and set free the contained embryonic bodies *en masse*, and, as a matter of fact, pressure on the cover-slip of the preparation frequently causes a number of the contained bodies to shoot out from the interior, rupturing the cell-wall in doing so. The various stages of the intra-corpuscular development of these bodies appears to be well brought out in stained preparations, especially when gentian-violet is used, considerable numbers of these ciliated spherical bodies are always present, no matter whether the observations be made early or late in the attack of cholera. In respect of their constancy, and of the part they play in the propagation of the various forms of this parasite, the

spheroidal bodies appear to me to be amongst the most important parasitic forms occurring in cholera blood. Although these bodies, in general, have a spheroidal form, they may rapidly develop into oval or ellipsoidal organisms. With regard to their size, they are usually larger than the red blood corpuscles from which they, in many cases, have made their exit. As we have elsewhere remarked, similar, if not identical, spheroidal bodies are developed independently of the red blood cells, from the more mature varieties of the parasite, and it is probable that the smaller varieties of the spherules, which are always present, are developed in the latter way only.

(5). *Cyst-like bodies* are always to be found. These bodies exhibit great diversity of form and character. A full description of the varieties would involve the writing of a more complete, comprehensive and pretentious paper than the present one.

(6). Various forms of *star-like organisms* are usually present in considerable numbers in all stages of the disease. They are sometimes very large, at other times small, intermediate sizes being by no means uncommon. They are extremely transparent, so much so, indeed, as to be invisible as corporate bodies during the active phase of their existence, appearing merely as bright, motile particles. The smaller varieties of these stellate bodies are structures described as "small ameboid bodies." This fact was made known by watching the ameboid bodies till they ceased to move. Much larger star-shaped organisms than those just mentioned are always to be seen. They consist of a central cell-like body, the shape of which varies as does also the size. A considerable number of flagellæ grow out from the surface, some of which are short, others long, some thick, others attenuated, but all the flagellæ appear to curve in one direction, each flagella usually assuming the form of the letter *f*. Occasionally the flagellæ of adjacent stars unite, forming a higher transparent reticular meshwork which must not, I need scarcely remark, be confounded with the similar but coarse meshwork formed by the fibrillæ of fibrin. Various forms of *flagellate organisms* are frequently to be found.

(8). In about 12 per cent of the slide-preparations of blood, long *flagellate organisms* may be seen. They vary in length from 15 to 40 *micras*, but have a tolerably uniform breadth.

(9). In about 6 per cent of cases these flagellæ may be seen to be encysted in a large oval or round cyst, in others they are seen to be just bursting through one extremity only being full. If the observations in connection with this body in cholera be continued, it will be observed that in these bodies disintegration begins at both extremities, and that, in common with the other parasitic forms, it eventually gives rise to a progeny of small spore-like organisms or ameboid bodies. Occasionally a number of flagellate bodies are seen clustered together, coiled round one another, or intertwined in various ways. In a small percentage of slide preparations of freshly-abstracted blood, one or more of these bodies may be seen in vigorous action.

It may be at once seen that the organisms above described differ in but few particulars from the parasite

of malarial fever, and this fact, to our reasoning, adds in no small degree, the great interest attaching to my discovery.

Should other observers bear out the statements herein made, we shall be justified in adopting generally, exactly the same preventive measures against cholera that we do against malarial infection, chief amongst which is the administration of quinine twice a day, morning and evening, in moderate doses. This we have done for the last four years, and we are not acquainted with a single instance in which it has failed to avert the disease, although we have passed through several epidemics. Believing that this organism has something to do with the production of many of the symptoms of cholera, we now treat all cases of that disease seen in the early stage, by the hypodermic injection of 10 grains of the neutral sulphate, giving 10 grains by mouth, and administering 30 grains by enema in the same way as we do in amebic dysentery. Up to date, we have scarcely had a sufficient number of cases to justify the expression of a conclusion on its merits.

The ease with which protozoa are killed as compared with bacteria, gives further interest to this observation.

The fact that in no case has it been definitely proved that the comma bacillus itself or its alkaloidal products either alone or conjointly by gaining access to the human body has produced cholera—a circumstance which goes much against its acceptance as the pathogenic agent of cholera.

Last year five students of Berlin drank the pure cultures with no effect except slight pyrexia in one case.

My first observation of the parasite was made under the following circumstances: I was making a series of blood examinations in all diseases of India; and I made my first examination of cholera blood on the 3rd June 1891, and after careful observation, I arrived at the startling conclusion that it contained the polymorphic forms of a parasitic sporozoa. There were several varieties present, and in considerable numbers, and several of the varieties were found moving about the field. I continued my observations for about 12 months after this, before publishing my first paper on the subject.

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THE TREATMENT OF CHOLERA.*

By A. MITRA, L.B.C.P., L.R.C.S. (Edin.)

Chief Medical Officer, Kashmir.

HAVING had to deal with two most virulent epidemics of cholera in Kashmir during the years 1888 and 1892, I had ample opportunities to test most of the usual methods of treatment of that disease. I therefore now take this opportunity of relating to you the result of the treatment adopted by me and also of introducing for your discussion the subject of the therapeutics of cholera. At the very outset we are confronted with a disputed point. Supposing we are called to treat a case of cholera in the very first stage of the disease, soon after the patient has had one or two stools, shall we or shall we not try to arrest the discharges

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

from the alimentary canal, and to allay the irritation of it by the administration of astringents and opiates? If I am not mistaken, the practice in India is to exhibit astringents and opiates at this stage with a view to stop the discharges, and, by lessening the drain from the system, minimize the risks of the subsequent collapse. Side by side with my article on cholera in the *Medical Annual* (WRIGHT, Bristol) of the year 1892, there appeared a valuable contribution from the pen of that distinguished physician, SIR GEORGE JOHNSON, in which he deprecates the administration of opium in the first stage, and advocates an evacuant drug, such as castor oil, in order to get rid of morbid and pathogenic material. KOCH, he points out, failed to produce cholera in guinea-pigs until at the time he introduced the poison into the stomach, he injected a dose of tincture of opium into the peritoneal cavity, his object being to render it possible for the cholera bacillus to remain longer and gain a footing in the intestine. "Is it not obvious," SIR GEORGE JOHNSON argues, "that those who endeavour to arrest the discharges by opium are repeating upon the human subject the lethal experiments which KOCH and others have performed on guinea-pigs?" SIR GEORGE JOHNSON, however, says that a dose of opium may be given when the diarrhoea has continued for some hours, the stools being copious and liquid, and there is an absence of colic and abdominal distension. It is very curious to observe that this opinion of SIR GEORGE JOHNSON is an echo of that which we find expressed in the Hindu Treatise of medicine called *Nidan*. *Nidan* says:—"Do not attempt to arrest the evacuations in the first stage, that is in the stage of diarrhoea," but it advises a small dose of opium when the collapse commences.

Our modern experience in India is just the reverse. In the earliest stage of cholera, by stopping the evacuations, we often succeed in stopping the course of the disease, but when once signs of collapse set in, opium and its preparations do harm. As in a case of cholera, the treatment in the first stage is a most important one, and as in India during severe epidemics, the pills and mixtures, which have to be largely supplied for the treatment of scattered and remote populations, all contain opium, it is a matter of great concern to Indian medical practitioners to know which of the above procedures is ratified by science and supported by experience. No experiment can be made during the overwhelming pressure of a cholera epidemic, and it is therefore in time of peace that we should be fortified with the knowledge which is the most reliable weapon to fight with.

In the stage of collapse I believe everybody agrees that diffusible stimulants are the only remedial agents which help us to tide over the crisis of that stage. It has been seen that intravenous injection of hot saline fluid often produces good results, but such results are almost always temporary. During the reactionary stage the physician's resources are tried to the utmost and every particular case has to be judiciously treated according to its own merits. The epidemic of 1892 in Europe and America has brought before the profession several new methods of treatment. I have had fortunately no opportunity to test them, but I doubt not that some of you, here present, who have to deal with endemic cholera, may

be able to tell us the result of your experience of them. The principal of these methods are, as you are aware:—Centripetal arterial infusion, intravenous and intra-arterial injection of sterilized solution of common salt or hydrogen peroxide, hot air and hot water bath, opium subcutaneously before occurrence of collapse, subcutaneous injection of atropine, subcutaneous injection of anti-cholera, a metabolic product of bacteria like tuberculin, subcutaneous injection of oil of camphor as a stimulant, cocaine and chloroform, and irrigation of the stomach for vomiting, subcutaneous injection of hot saline solution in the algid stage in preference to intravenous injection, saline injection into the bladder, injection of carbonic acid into the stomach and intestines, diluted lactic acid, copious draughts of per-iodate solution internally and transfused under the skin, rectal injection of tannin or caustic, entero-clytic treatment, washing the stomach and bowels with solution of hydrochloric acid.

During the epidemic in Kashmir in 1892, the treatment adopted by me was as follows:—

If a case was seen early, that is to say soon after the purging or vomiting or both appeared, and if, as it often happens, signs of collapse were not present from the beginning, an astringent mixture with opium was administered every two hours for two or three doses. In such cases in which, on account of persistent vomiting, mixtures are not retained, morphine hypodermically, or opium and tannin entero-clytically, were administered. Two ready-made mixtures were largely used. Mixture No. 1 contained dilute sulphuric acid, tincture of opium, carbolic acid, and creosote, and mixture No. 2 was made up with acetic acid, spirits of nitric ether, camphor and ammonia aromatic. In the first stage mixture No. 1 was administered; a large mustard plaster was applied over the epigastrium, hot water bottles and friction or hot water bath were employed to relieve cramps. Acidulated water or mint and camomile tea was given to quench thirst. In the collapse stage, opium and its preparations were strictly forbidden, and mixture No. 2 was largely used. During reaction, if the temperature rose, the bath was used; if the liver was inactive, small doses of calomel were given. To stimulate the kidneys, tincture of cantharides was given internally with local counter-irritation. In cases in which there were signs of renal congestion or nephritis, cantharides was not used. Pilocarpine hypodermically acted very well in a few cases. To relieve cerebral congestion a few leeches applied behind the ear often produced a satisfactory result. Eighty cases were treated by me at the cholera hospital in Srinagar strictly according to the above method, 40 were cured and 40 died, shewing a death-rate of 50 per cent.

Fifty cases were treated with salol, 22 recovered and 28 died, showing a death-rate of 56 per cent.

The effect of LORBER's cure for cholera, of which some of you may have heard, was carefully watched in 50 cases; in 34 cases the medicine was commenced in the early stage, 14 recovered, 20 died, death-rate 58.8 per cent. In the remaining 16 the medicine was given during the collapse stage, 5 recovered, 11 died, death-rate 68.7 per cent. In the cholera hospital a special ward was allotted for a few

days for the treatment of cases by water only. Twenty-nine cases were treated with nothing but water from beginning to end; copious drinks of sterilized water were allowed; 15 recovered, 14 died, shewing a death-rate of 48.8 per cent. So you see I have not killed many by withholding drugs! This fact, I am afraid, will not be very palatable to our professional brethren of the *similibus curantur* principle.

Hypodermic injections of morphia and atropia, combined with sulphuric and carbolic acids internally, failed to yield any satisfactory result.

No improvement followed in the treatment of 4 cases by argenti-nitras internally and by enema.

In 3 cases cannabis Indica was tried. One made a rapid recovery and two died. In the collapse stage of 5 cases, gum ammoniac internally, together with stimulants and injection of sulphuric ether, was tried, but no effect was produced. No appreciable result was observed after blistering the yagus. Besides the above, chlorodyne, lead and opium pills, patent pills such as Cotter's, Daji's and Bellow's almalaj, were also used. At the end of the epidemic we found that out of a total of 16,845 cases to whom some sort or other of medical aid was given, 5,133 were cured and 11,712 died. It may strike you that we used too largely, patent unknown drugs. I plead guilty to the charge, but my plea for doing so was partly that many of them were asked for by the temporary medical subordinates that were employed for the medical relief work, and partly that I wanted to give a fair trial to some of the patent cholera cures that find such ready market in India, and once for all to pronounce for or against them. I now take this opportunity to record unhesitatingly that by the use of these vaunted cholera cures by amateurs much useful time is lost. If the State has no power to suppress them, I trust the authoritative voice of the profession will guard the public against them.

In my opinion alcohol is unnecessary in the treatment of cholera. In the collapse stage, small quantities of champagne with soda water may be given as a rapid stimulant, but spirits are seldom indicated, and I have never seen any good arising from them. I know of a gentleman who, when travelling alone over the Himalayas, had a smart attack of diarrhoea and vomiting. He had nothing with him but whisky to which he helped himself freely and was cured. During the epidemic in Kashmir he most sanguinely advocated to me the use of whisky. Similarly, another gentleman thought he had discovered the specific for cholera after one day curing his servant from an attack of cholera, as he thought, by the administration of Worcester sauce in the absence of anything else in the house that he could think of!

It must be admitted that our therapeutic resources for the treatment of cholera are still very unsatisfactory. In the *Civil and Military Gazette* of 16th June 1892, a medical gentleman advocated mustard emetic, and quinine and calomel, and the writer said that he always tried this mode of treatment having never failed in one single instance and guaranteed 95 per cent. of cures! As soon as I read this, I tried these medicines, following the writer's instructions, in 5 cases of cholera. Two died and one recovered, the latter making very slow progress. This hardly requires any comment. If we can catch the disease young, we

often succeed in cutting short an attack. In fact, by the judicious use of opium and astringents in the early stage, we can cure 30 per cent. of cases. When, however, the disease is unchecked and when the evacuation stage is advanced, bordering upon the next stage of collapse, drugs are useless; careful nourishing is then the only helpmate to struggling nature. Recovery or death depends upon the extent of mischief produced by the germs and their toxic products, the constitution of the patient, and the vital resistance which his tissues are able to offer to the toxic products. During the stage of reaction, however, judicious treatment is of the greatest value, and many a life has been lost by neglect in this stage of the disease. It is not a cholera mixture nor a cholera pill which should then be depended upon, but the symptoms of every particular case must be carefully observed, weighed and treated on principles based on rational medicine. The average mortality in fully-established cholera cases is about 60 per cent. in the beginning of the epidemic, 50 per cent. during its course, gradually falling to 25 per cent. or less, at the end of the epidemic. Any drug to have a distinct curative effect must reduce this mortality by at least 15 per cent.

I am therefore of opinion that, until further scientific researches into cholera and its treatment throw more light on the nature of the disease and the weapon best suited to fight with it, "a guarantee of 96 per cent. of cures" cannot be made by a scientific physician. The subject of the treatment of cholera is much complicated by the publication of immature hypotheses, and unless a physician is fully aware of the ground on which he is standing, he will jump from one drug to another till at last he realizes his position. The bacteriologist, the epidemiologist and the practical physician have each to contribute his own quota. The results of their researches, and their experience when collected together, will probably open out to us a vista of possibilities in successfully coping with the disease.

With these remarks, gentlemen, I beg to introduce to you the subject of the treatment of cholera, and I have no doubt that discussion would throw much useful light on this important subject. This is the first great assembly of physicians in modern India. I say modern India because there is evidence of Medical Congresses in ancient India; for CHARAKA, the great Hindu physician, says:—"An assembly of physicians is the foremost of all things that contributes to certitude of diagnosis"; also "Conversation and discussion with a professor of the same science is the foremost of all things that contributes to vigour of the understanding." I trust with CHARAKA, that conversation and discussion on this important subject will lead to a better understanding of the therapeutics of cholera.

CAUSES OF ILL-HEALTH OF HINDU WOMEN AND CHILDREN.

By HARA KALI SEN, V.L.M.S.,
Lalganj, Dinajpur.

In "Woman in India" Miss BILLINGTON says: "If I can only convince some of those who vote away blithely in a confidence as profound as their ignorance, upon matters which as grave issues of life, send death to our Eastern fellow-subjects of the Crown, that Indian women are not

altogether in such a pitiful plight, as some of their so-called friends come and tell us, my inquiries will not have been made in vain." MISS BILLINGTON'S inquiries are not only made in vain, but they are calculated to keep our women more in pain, as her defence of early marriage and Zenanas are not based on facts. As a flying visit to India is not sufficient for a foreigner in which to learn all the good and evil effects of our social and religious customs, I would advise MISS BILLINGTON to read "Kamala," the story of a Hindoo girl's life, in English.

Early Marriage.—MISS BILLINGTON, says: "Inaccurate sensationalism reaches its climax over the system of child marriage. The assiduously circulated idea of missionary reports and social grievance seekers is, that the wretched girl-infant is married at about 5 or 6 years of age, generally to some one vastly older than herself, who takes her away whenever he pleases, and exercises whatever violence or brutal lusts he cares for." "The ceremony of infant marriage is a mere form of betrothal." It is not a mere form of betrothal, but it is a regular marriage. If it is a betrothal, why are girls allowed to lie on the same bed with their husbands? And Government would not have been obliged to raise the age of consent from 10 to 12 years, in the face of such tremendous opposition and widespread dissatisfaction of Indian people. None can deny the truth, that before the menstruation of child-wives, attempts for coitus are often made with disastrous effects on the health, and sometimes lives, of our girls. If it is a mere form of betrothal, why are the girls not allowed to marry after the death of their would-be husbands?

Enforced widowhood and polygamy.—Widows have better health than our married women, whose health is shattered by annual child-bearing and rearing up children. Though our widows are free from diseases of the generative organs, yet they suffer from disorders of the digestive system, neuralgia, hysteria and other nervous diseases. Mentally they suffer from melancholia, which is one of the causes of many of the suicides, among Hindu women. I described in the *Record* the horrors of *Akulashi*, which compels the widows of the higher castes to fast twice in a month, for 24 hours, without even a drop of water in the hottest days of May, when men in Calcutta drink plenty of ice-water, but still die of sun-stroke and heat apoplexy. MANU, the great Hindu law-giver, says:—"In no *Shashtra* is there any advice to chaste women to take a second husband after the death of the first." (Manu Sanhita Chap. V verse 162). But see what he says next: "If the wife dies first, you should, after performing the cremation and funeral ceremony, marry again." (Chap. V. verse 168). In Hindu society a man can marry as often as he likes, but the most degraded form of polygamy exists in the society of *Kulin Brahmins*, among whom, even graduates are marrying more than one wife and polygamy is increasing the number of widows. "An idea may be formed of the extent to which the marriage of infants is prevalent in Lower Bengal, from the statistics given in the last census returns which shew 30,332 married girls and 6,780 married boys under 4 years, while there are 6,780 widows under the same age. The number of married girls of, and under 10 years was 378,754, while that of widows of the same age was 13,998."

Want of education.—Thanks to LADY DUFFERIN and a few others, female education in India is daily progressing. But it is not complete, only partial, because though progressing in Native Christian and Brahmo societies, it is not allowed to enter the zenanas of the Hindus and Mahomedans. In Hindu society, girls of 12 years are not allowed to go to school, and are confined within the prison of a zenana. Female education is not allowed by MANU, who says: "Women have no right to read *Souritics*, *Vedas* and other religious *Shastras*. They have also no right to any mantra; for this reason they are very low and worthless." (Manu Sanhita, chap. IX. verse 18). One of the causes of ill-health of our women is their ignorance of the laws of hygiene, and this ignorance of the mothers, causes ill-health in their children. For example, a Hindu mother believes that the more she feeds her infant the more she improves its health and quite unaware of the dangers of overfeeding, she gets a large cup of milk, which, regardless of its cries or unwillingness, she continues to force down its throat till she finds that its belly is enormously distended. This overfeeding is one of the principal causes of hepatic diseases, as the diseased little liver is overworked for the chyliification of such a large quantity of milk at a time, and is not allowed to work freely, on account of the great pressure exerted on it. I remember when as a boy, I was often beaten by my female relatives for not taking, even when hungry, a bellyful of food. I was not allowed time to chew, but was advised to swallow as fast as I could the greatest quantity; within the shortest period, being their golden rule. As he who took time to eat was rebuked for his laziness. The mortality of Hindu children is a sufficient proof of the ignorance of our women. "Of every 1,000 European children born in Calcutta, 58 die before they reach the age of one year. Among Eurasians and mixed races, the death rate in the first year of age is 306 per 1,000 born, among Hindus, 315; and among Muhammedans, 363 die before they are a year old in every 1,000 born annually." The ratio of deaths of Hindu and Muhammedan children to European children is 6 : 1.

Zenana.—Pure air, light and cleanliness are demanded for health, but unfortunately these cannot be obtained within Hindoo and Mahomedan zenanas, where there are neither doors nor windows in the outside of the quadrangle through which the women inside and men outside might perchance see each other; and in deliberately and jealously trying to shut out our neighbour's gaze, we shut out pure air and light, converting our dwellings into dungeon-keeps, where we immure our wives and increase the mortality of our infants, who are never permitted in the open air, lest they come under the influence of *Bataah* (evil air) or *Drisht* (evil sight). Referring to the malhygiene of a zenana, a trenchant writer says of a rich native's palace: "We need not point out how dangerous this state of things is, how low the state of health among the women and children, and how terrible the result were cholera to enter the town in which such a palace stands! What ought to be done in such a case? It is too bad to be mended, and should therefore be ended."

Female education and emancipation, instead of being a luxury indulged in by fashionable England-returned babus, have become a necessity among the natives, so that

MISS BILLINGTON's argument that because a few Mahomedan ladies elected to preserve the zenana, Indian women, as a whole, are not eager for emancipation is as sensible as the theory that a caged bird prefers the cage to freedom, simply because it does not know what freedom is; but let that same bird have the enjoyment of flying about for a little while, and instead of being a nest as heretofore the cage becomes a prison. Is MISS BILLINGTON aware that in some districts of Bengal a daughter-in-law dare not speak to, or look at her mother-in-law or any of the elderly women of her household? Has she read that MANU teaches (Chap. IX, verse 2) that husbands and male relatives should not allow a woman out of their sight or to occupy an independent position, because they are base sensual creatures, who estimate a man not by his beauty, age or intellect, but by his ability to gratify their lust, and that they are adulteresses or harlots by nature and choice: living a chaste life only when prevented by opportunities for immorality. Does she know that the Hindu husband must be worshipped as a god (Chap. V, verse 154), and that no matter how vile, how base, or how unfaithful he may be to her, the wife has no moral right to hate him whose bond-slave she is? Cruel as these laws of MANU are, they are not dead-letters, and many a woman commits suicide to escape the brutal treatment she is subjected to if she does not give an unworthy husband the love and respect he demands from her. While they firmly believe that very few Western ladies are chaste, conservative Hindus boast of the chastity of their own women and oppose all attempts to emancipate them because they construe harlotry as synonymous with freedom, and the abolishment of the zenana. If Hindu zenana creatures be proud of their chastity under pressure of vigilant eyes, prisoners in jail ought to be equally proud of being virtuous by being denied the opportunity to sin. Educated revivalist Hindus bitterly oppose female advancement and ridicule, revile, condemn and spurn the Brahmo ladies from pulpit, stage and platform whenever they can get the chance, simply because the latter move freely in society; but strong though the tide of opposition is, the time will yet come when, in spite of MISS BILLINGTON's cry of "no necessity nor desire for emancipation" the murderous prejudices and superstitions of MANU will be swept wholesale out of India.

Social status.—For the woman there is nothing but tyranny and oppression, as Hindu society thinks it a disgrace for a man to enquire into his wife's affairs or attend her when she is ill, and MANU says:—"Do not eat with your wife (Chap. IV verse 43) and do not see her when she eats." Whatever is good and wholesome should be preserved for the men, and after the men have eaten the women may partake of what is left on their plates (i.e. the *prasad*). Consequently, what do our women eat? Whatever is rotten or is rejected by the male members of the household, or she must starve. Bad food and privation make her ill, but no one bothers his head about giving her medicine. When I was practising at Mohadebpore, a respectable youth came to me and surreptitiously pulling a phial out of his pocket said: "Doctor Babu! my wife gets fever daily, but she still works hard, and though she has become very weak and lean, no one ventures to give her any medicine, and

I myself dared not attempt to do so in the presence of others, lest I may be despised as a hon-peaked husband. If you prepare some medicine I will take it home this evening and give it to her secretly." The poor woman no longer lives to be crushed down by Hindu society. During life she was no better off than any other daughter-in-law who is and must be the early morn to midnight drudge of a huge array of relations-in-law and woe, woe to her if she infringe an iota of the cursed social laws that claim her serfdom.

Legal status.—None, absolutely none. A Hindu, who had two wives and was a profligate and drunkard, was still respectable (?) because he was a man and not a woman. Living with his second wife he cruelly ill-treated his first one, who ran away to her father's house and refused to return to her husband, who immediately proceeded against her for restitution of conjugal rights and got her imprisoned under section 200 of Criminal Procedure Code.

What an unjust law! How cruel? and still MISS BILLINGTON pleads that our women do not wish to be emancipated. So long as her husband lives, the Hindu woman can claim maintenance; but should she be left a widow without any private means of her own, the Hindu law does not provide for her in the absence of male issue by her husband, nor is anyone legally bound to support her. Thus:—"My father, who is living, has some property, while I have nothing; but I have four brothers, a wife and two daughters. Now if I die my wife has no claim on my father, nor on her father's property, which her brothers would inherit, and though I have many well-to-do relatives, not one of them is legally bound to support her; but should she have borne me a son and that son be alive, at the time of my decease, things would be just the reverse. In the face of all this will MISS BILLINGTON still persist in maintaining that our women are not in a pitiful plight and that they do not desire emancipation?

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REPORT OF SURGICAL OPERATIONS PERFORMED AND MEDICAL WORK DONE DURING 1894-95 IN THE JUNAGADH STATE HOSPITAL.

By T. M. SHAH, L.M.S.

Chief Medical Officer, Junagadh.

(Continued from page 6, Vol. IX).

Radical cure of Hernia: unsuccessful; tetanus: recovery.—DEVNAR BHOGA had left inguinal scrotal reducible hernia of enormous size of three years' standing. It was operated upon for radical cure on 14th June 1894. After the usual incision, the sac could not be well separated; it was therefore invaginated and the pillars brought together by catgut, and antiseptic dressing applied.

19th.—Temperature varies between 98° and 101°. Patient suffers from cough; the part is painful and tender. Dressing changed as suppuration appears to have set in. Bowels constipated since operation. The thigh is semi-flexed and cannot be fully extended.

22nd.—Cough continues. Bowels moved four times.

30th.—Stools dysenteric, griping and tenesmus. Patient very restless and distressed. Prescribed anti-dysenteric pills.

2nd July.—Has got lockjaw and spasm of muscles of the neck.

3rd.—Spasm of all the muscles of the body, deglutition difficult. Prescribed chloral hydrate and potass bromid.

5th.—Hernia has descended into the scrotum. Spasm ceased. Wound healed up and discharged.

Strangulated Hernia.—PRATONJI, male aged 54, suffers from right scrotal hernia since many years. It became strangulated this afternoon.

1st September 1894.—Taxis, inverted position, fomentation and enema could not succeed in reducing it. The symptoms became aggravated. Operation was then to be performed; but, as a last resource, he was given hot hip bath, and while in water, taxis succeeded in reducing it. He had subsequently a sharp attack of diarrhoea.

2nd.—GHO HAUSA, aged 50, 7th July 1894, suffers from right inguinal hernia since seven years. It has not yet descended into scrotum. Since a week it has come down and is strangulated. Bowels constipated and patient vomits on taking anything into the stomach. Rupture is hard, painful, without impulse and without any symptoms of peritonitis. Patient was placed in inverted position, fomentation was applied and an enema administered. The next day he passed a motion, and from thence made gradual recovery.

Hydrocele.—P. N., aged 42, had a hydrocele of the left scrotum. It was tapped on the 19th February 1895. One pound of serous fluid was withdrawn and $1\frac{1}{2}$ drams of tincture of iodine injected into the tunica vaginalis. Patient discharged well on the 28th February 1895.

Hydrarthrosis.—RANO JESA suffers from hydrarthrosis of the left knee. The joint was aspirated and 4 oz. of clear fluid removed on 1st August 1894. The joint was strapped with mercurial plaster.

Two ovariectomies were successfully performed during the year:—

1. **AVAL**, female aged 40, was admitted with ovarian dropsy in August 1893; the abdominal tumour having the appearance of a gravid uterus. The tumour was inclined to the right side, and uterus anteverted. She had three children. The last one was born about 18 months ago. Menstruation was irregular. Abdomen was tapped and 164 oz. of grumous fluid were withdrawn. After this evacuation a solid floating tumour yet remained without any distinct trace of origin or attachment.

She was re-admitted in February 1894 with re-distension of abdomen. Again the tumour was inclined to the right side and was full in the upper part, as if it were connected with the liver, the hypogastrium being comparatively empty.

Ovariectomy was performed on the 6th March 1894 by making an incision in the middle line, commencing three inches above the umbilicus, and carrying the incision to an inch below this point. After opening the peritoneum the hand was passed in and a few adhesions were broken down; the cyst was then punctured with trocar and canula and 144 oz. of a thick viscid dark fluid evacuated. A small quantity of fluid escaped by the side of the canula and passed into the abdomen. After thus draining it, a large growth remained, which could not come out of the wound. On again examining the part with the hand it became evident that the cyst originated in the left ovary.

The wound was then enlarged downwards and the growth extracted. The pedicle consisted of the entire broad ligament, including the Fallopian tube. It was ligatured with silkworm gut and then replaced into the pelvic cavity; sutures and iodoform dressing were then applied to the abdominal wound.

The cyst was multiple, the growth being another cyst inside the mother cyst.

The subsequent progress was satisfactory. The highest temperature on the 3rd day was 101° , the pulse 108, and respiration 30, but they were all reduced to normal on the 5th day after operation. She partook of milk sparingly for the first two days, arrowroot was given on the 3rd day. She complained of pain on the 6th day, an enema was therefore given which acted freely. She then had daily motions, and passed urine voluntarily throughout, after the operation. Abdominal wound united by first intention. Primary dressing was changed on the 12th day and sutures were then removed; she was discharged well on the 6th April 1894—a month after the operation.

2. **VALLI**, female aged 35 years, admitted with ovarian dropsy on February 1895, the growth was noticed first says the patient, some years ago in the right iliac region. It gradually increased to the present dimensions. Abdomen is now distended to the full, measuring 39 inches in circumference. Her husband died 20 years ago, shortly after her marriage, and she had never conceived. Catamenia were regular, but have not appeared since three months. Abdominal tumour is fluctuating in some parts, but gives a solid feel in others. Uterus anteverted. She was suffering from bronchial cough.

Ovariectomy was performed on 6th February 1895. An incision, about 3 inches long was made in the middle line, commencing below the umbilicus. On opening the peritoneum the white glistening wall of the cyst was exposed. The incision was then enlarged to the extent of $1\frac{1}{2}$ inches above the umbilicus; the cyst was tapped and 375 oz. of dark thick oleaginous fluid withdrawn. A small quantity of this fluid escaped by the side of the canula into the abdominal cavity. The empty cyst was pulled out, there being no adhesions, when it was found to have originated from the left ovary. The entire left broad ligament and Fallopian tube were adherent. This broad pedicle was tied with silkworm gut and replaced into the pelvic cavity, which was next sponged; the abdominal wound was then sutured with silk and iodoform dressing applied. Pad and bandage were then put on.

3th February.—She was given simply ice and milk and opium and quinine pills.

12th.—Her temperature varies between 98° and 100° . Pulse 96 to 110. Respiration 22 to 28. Urine has to be withdrawn daily. She is now given milk and arrowroot. No pain whatever in abdomen. She suffers from cough. Opium and quinine pills continued.

14th.—Temperature 101° . Pulse 120. Respiration 36. Complaint of pain in hypogastrium and desire to pass stool. Olive oil was therefore injected into the rectum but without effect. Passes urine voluntarily. Urine had to be withdrawn for the first three days.

16th.—Primary dressing of abdomen changed. Wound united by first intention. No discharge whatever. There is a

and the surrounding swelling over the hypogastrium. It is not so much as painful. The patient feels no pain even while coughing. Gavage of warm water was given.

During the next two or three days she passed copious mucus, and the swelling disappeared, shewing that it was due to accumulation of feces.

17th.—Temperature 97°3. Pulse 96. Respiration 24. She is comfortable but her cough is getting more troublesome, she is not able to expectorate freely and respiration is wheezing. She sits up in bed and has now begun to take solid food. Prescribed stimulants and expectorants.

18th.—Cough is constant and expectoration more difficult especially during the night. Temperature 98°. Pulse 92. Respiration 22.

20th.—Stimulants and expectorants continued, but the cough became more troublesome, the respiration labored, and she died this afternoon.

Post-Mortem.—The abdominal wound had perfectly united, the intestines and other organs in the upper part of the abdomen were normal in appearance, those in the pelvic region were agglutinated together by lymph effusion. There was no sign of suppuration or degenerative inflammation.

Both the cases were alike in the seat of origin of the cyst; on the left side in both, the broad ligament and Fallopian tube were removed. Both operations were performed strictly antiseptically, and so far as the operations were concerned, both were successful. The latter case succumbed to the aggravation of bronchial inflammation to which the patient was subject, even before the operation was undertaken.

Symphiotomy.—MANEK DEYCHAND, a female, had two children, and suffered from backache and lameness. On vaginal examination, considerable antero-posterior contraction of the pelvis was found, and the sacral promontory was deviated a good deal forward. She became pregnant and was brought to hospital at full term with the os fully dilated. The antero-posterior diameter of the pelvis was hardly 2½ inches. Forceps and version were inadmissible, and the only alternative was either Symphiotomy or Caesarian section. The former was, of course, preferable, and was resorted to with success. After anaesthetising the patient, the ligament and cartilage of the symphysis pubis were divided by a bistoury and then within half an hour a male child was delivered. The separation of the pubic uni was very marked during the delivery. The child died the next day, but the mother made a good recovery.

Difficult labour: delivery by forceps.—JEVI GAXHADAR aged 32, primipara, had labor pains since five days. Membranes were ruptured, the head presented in the 2nd position. It was impacted in the cavity, and a large caput succedaneum had formed. The patient was watched for 12 hours, but the head made no progress. On the 21st January 1894, the patient was anaesthetised and a still-born male child was delivered by the forceps. She made a good recovery.

Tetanus Letor.—GANGA BAIJAN, Hindoo female, 30, 45 years, 1 para, had labor pains for 24 hours, since the 1st May 1894. Delivered of a female healthy child at 4-30 a.m. Discharged well 12th May 1894.

Placenta Praevia.—M. formula, multipara, reached the full term of her fifth pregnancy. Labor set in with excessive hemorrhage: for three days the patient did not allow an examination of the parts, but on the fourth day, when in extremis, medical aid was sought. She was extremely weak, and the bleeding continued. She was anaesthetised and a hand was introduced into the uterus; the membranes were ruptured, the child turned and delivered by the foot. Patient died an hour afterwards of sheer bloodlessness.

Tracheotomy.—Parashottam N. was admitted with syphilitic laryngitis on 7th August 1894. His palate was perforated, the nose depressed from destruction of cartilages and septum. Voice was hoarse; respiration wheezing and labored; deglutition difficult. He could not sleep. He was prescribed iodide of potassium and perchloride of mercury. On the 15th of August, tracheotomy was performed, troublesome venous bleeding had to be arrested before opening the tube. On opening the trachea, a large quantity of phlegm came out. As the breathing was not regular, a vulcanite tube was substituted for a silver one already introduced. He progressed favorably a few days, but a large quantity of discharge was thrown out of the tube daily, and he at last succumbed a fortnight after the operation.

Facial Neuralgia: Excision of Infra-orbital Nerve.—KHANDAI DAOODJI, aged 52 years, suffers from paroxysmal pain and twitchings of the muscles of the right side of the face. Pain starts from below the orbit and extends to the cheek and lip. He was treated with exalgin, potass. iodid, antipyrin and morphia injections. Some suspicious teeth from the right upper jaw were extracted without any benefit whatever.

On the 16th December 1894, the patient was anaesthetised and a vertical incision made over the right cheek at the lower margin of the orbit and another transverse one along the orbital margin. The tissues were dissected and the infra-orbital nerve exposed at its exit from the infra-orbital foramen, where it radiated in three filaments. It was raised, stretched and about ½ inch of it was excised. The wound was treated antiseptically. Patient was discharged well on 3rd January 1895.

Neuralgia of the Crural Nerve.—A man was admitted with neuralgic pain along the crural nerve on the right thigh, leg and foot. He was treated with embrocations, exalgin, morphia injections and electricity, but to no effect. He was discharged on 14th April 1894.

Fatty Tumour.—K. D., aged 40, had a large pendulous fatty tumour about the size of a melon, situated on the back, of 16 years' standing. For 12 years it was small and stationary, and then increased rapidly during the next four years. On 9th April 1894, the patient was anaesthetised and the growth removed. Although treated antiseptically, the wound suppurated and healed by granulation.

Cystic Tumour.—(1). V. R. had a cystic tumour about the size of a walnut on the left cheek; the skin was adherent. On the 22nd April 1894, patient was anaesthetised and the cyst dissected out. While dissecting it, the cyst burst and a cheesy matter exuded from it. A button hole was accidentally made in the skin. Wound healed by first intention.

2nd July.—Has got lockjaw and spasm of muscles of the neck.

3rd.—Spasm of all the muscles of the body, deglutition difficult. Prescribed chloral hydrate and potash bromid.

5th.—Hernia has descended into the scrotum. Spasm ceased. Wound healed up and discharged.

Strangulated hernia.—PASTORI, male aged 54, suffers from right scrotal hernia since many years. It became strangulated this afternoon.

1st September 1894.—Taxis, inverted position, fomentation and enema could not succeed in reducing it. The symptoms became aggravated. Operation was then to be performed; but, as a last resource, he was given hot hip bath, and while in water, taxis succeeded in reducing it. He had subsequently a sharp attack of diarrhoea.

2nd.—GREG HAUSA, aged 50, 7th July 1894, suffers from right inguinal hernia since seven years. It has not yet descended into scrotum. Since a week it has come down and is strangulated. Bowels constipated and patient vomits on taking anything into the stomach. Rupture is hard, painful, without impulse and without any symptoms of peritonitis. Patient was placed in inverted position, fomentation was applied and an enema administered. The next day he passed a motion, and from thence made gradual recovery.

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1. AVAL, female aged 40, was admitted with ovarian dropsy in August 1893; the abdominal tumour having the appearance of a gravid uterus. The tumour was inclined to the right side, and uterus anteverted. She had three children. The last one was born about 18 months ago. Menstruation was irregular. Abdomen was tapped and 164 oz. of grumous fluid were withdrawn. After this evacuation a solid floating tumour yet remained without any distinct trace of origin or attachment.

She was re-admitted in February 1894 with re-distension of abdomen. Again the tumour was inclined to the right side and was full in the upper part, as if it were connected with the liver, the hypogastrium being comparatively empty.

Ovariectomy was performed on the 6th March 1894 by making an incision in the middle line, commencing three inches above the umbilicus, and carrying the incision to an inch below this point. After opening the peritoneum the hand was passed in and a few adhesions were broken down; the cyst was then punctured with trocar and cannula and 144 oz. of a thick viscid dark fluid evacuated. A small quantity of fluid escaped by the side of the cannula and passed into the abdomen. After thus draining it, a large growth remained, which could not come out of the wound. On again examining the part with the hand it became evident that the cyst originated in the left ovary.

The wound was then enlarged downwards and the growth extracted. The pedicle consisted of the entire broad ligament, including the Fallopian tube. It was ligatured with silkworm gut and then replaced into the pelvic cavity; sutures and iodoform dressing were then applied to the abdominal wound.

The cyst was multiple, the growth being another cyst inside the mother cyst.

The subsequent progress was satisfactory. The highest temperature on the 3rd day was 101°, the pulse 108, and respiration 30, but they were all reduced to normal on the 5th day after operation. She partook of milk sparingly for the first two days, arrowroot was given on the 3rd day. She complained of pain on the 6th day, an anæmia was therefore given which acted freely. She then had daily motions, and passed urine voluntarily throughout, after the operation. Abdominal wound united by first intention. Primary dressing was changed on the 12th day and sutures were then removed, she was discharged well on the 6th April 1894—a month after the operation.

2. VALLI, female aged 35 years, admitted with ovarian dropsy on February 1895, the growth was noticed first says the patient, some years ago in the right iliac region. It gradually increased to the present dimensions. Abdomen is now distended to the full, measuring 39 inches in circumference. Her husband died 20 years ago, shortly after her marriage, and she had never conceived. Catamenia were regular, but have not appeared since three months. Abdominal tumour is fluctuating in some parts, but gives a solid feel in others. Uterus anteverted. She was suffering from bronchial cough.

Ovariectomy was performed on 6th February 1895. An incision, about 3 inches long was made in the middle line, commencing below the umbilicus. On opening the peritoneum the white glistening wall of the cyst was exposed. The incision was then enlarged to the extent of 1½ inches above the umbilicus; the cyst was tapped and 375 oz. of dark thick oleaginous fluid withdrawn. A small quantity of this fluid escaped by the side of the cannula into the abdominal cavity. The empty cyst was pulled out, there being no adhesions, when it was found to have originated from the left ovary. The entire left broad ligament and Fallopian tube were adherent. This broad pedicle was tied with silkworm gut and replaced into the pelvic cavity, which was next sponged; the abdominal wound was then sutured with silk and iodoform dressing applied. Pad and bandage were then put on.

8th February.—She was given simply ice and milk and opium and quinine pills.

18th.—Her temperature varies between 98° and 100°. Pulse 96 to 110. Respiration 22 to 28. Urine has to be withdrawn daily. She is now given milk and arrowroot. No pain whatever in abdomen. She suffers from cough. Opium and quinine pills continued.

14th.—Temperature 101°. Pulse 120. Respiration 36. Complaints of pain in hypogastrium and desire to pass stool. Olive oil was therefore injected into the rectum but without effect. Passes urine voluntarily. Urine had to be withdrawn for the first three days.

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seen was increasing swelling over the hypogastrium. It was tender but not painful. The patient feels no pain even while coughing. Enema of warm water was given.

During the next two or three days she passed copious solid stools, and the swelling disappeared, allowing that it was due to accumulation of feces.

17th.—Temperature 97°3. Pulse 96. Respiration 24. She is comfortable but her cough is getting more troublesome, she is not able to expectorate freely and respiration is wheezing. She sits up in bed and has now begun to take solid food. Prescribed stimulants and expectorants.

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Post-Mortem.—The abdominal wound had perfectly united, the intestines and other organs in the upper part of the abdomen were normal in appearance, those in the pelvic region were agglutinated together by lymph effusion. There was no sign of suppuration or degenerative inflammation.

Both the cases were alike in the seat of origin of the cyst; on the left side in both, the broad ligament and Fallopian tube were removed. Both operations were performed strictly antiseptically, and so far as the operations were concerned, both were successful. The latter case succumbed to the aggravation of bronchial inflammation to which the patient was subject, even before the operation was undertaken.

Symphiotomy.—**MANEK DEVCHAND**, a female, had two children, and suffered from backache and lameness. On vaginal examination, considerable antero-posterior contraction of the pelvis was found, and the sacral promontory was deviated a good deal forward. She became pregnant and was brought to hospital at full term with the os fully dilated. The antero-posterior diameter of the pelvis was hardly 2½ inches. Forceps and version were inadvisable, and the only alternative was either Symphysiotomy or Caesarian section. The former was, of course, preferable, and was resorted to with success. After anaesthetising the patient, the ligament and cartilage of the symphysis pubis were divided by a bistoury and then within half an hour a male child was delivered. The separation of the pubic ram was very marked during the delivery. The child died the next day, but the mother made a good recovery.

Difficult labour: delivery by forceps.—**JEVI GANGADAS** aged 32, primipara, had labor pains since five days. Membranes were ruptured, the head presented in the 2nd position. It was impacted in the cavity, and a large caput succedaneum had formed. The patient was watched for 12 hours, but the head made no progress. On the 21st January 1894, the patient was anaesthetised and a still-born male child was delivered by the forceps. She made a good recovery.

Prolonged Labor.—**GANGA BANNER**, Hindu female, aged 25 years, 1 para, had labor pains for 24 hours, since the 10th May 1894. Delivered of a female healthy child at 6.30 a.m. Discharged well 13th May 1894.

Placenta Praevia.—**M. female**, multipara, reached the full term of her fifth pregnancy. Labor set in with excessive hemorrhage; for three days the patient did not allow an examination of the parts, but on the fourth day, when in extreme medical aid was sought. She was extremely weak, and the bleeding continued. She was anaesthetised and a hand was introduced into the uterus: the membranes were ruptured, the child turned and delivered by the feet. Patient died an hour afterwards of sheer bloodlessness.

Tracheotomy.—**Parshotam N.** was admitted with *siphilitic laryngitis* on 7th August 1894. His palate was perforated, the nose depressed from destruction of cartilage and septum. Voice was hoarse; respiration wheezing and labored; deglutition difficult. He could not sleep. He was prescribed iodide of potassium and perchloride of mercury. On the 16th of August, tracheotomy was performed, troublesome venous bleeding had to be arrested before opening the tube. On opening the trachea, a large quantity of phlegm came out. As the breathing was not regular, a vulcanite tube was substituted for a silver one already introduced. He progressed favorably a few days, but a large quantity of discharge was thrown out of the tube daily, and he at last succumbed a fortnight after the operation.

Facial Neuralgia: Excision of Infraorbital Nerve.—**KHANNAH DAOODJI**, aged 52 years, suffers from paroxysmal pain and twitchings of the muscles of the right side of the face. Pain starts from below the orbit and extends to the cheek and lip. He was treated with exalgin, potass. iodid, antipyrin and morphia injections. Some suspicious teeth from the right upper jaw were extracted without any benefit whatever.

On the 16th December 1894, the patient was anaesthetised and a vertical incision made over the right cheek at the lower margin of the orbit and another transverse one along the orbital margin. The tissues were dissected and the infra-orbital nerve exposed at its exit from the infra-orbital foramen, where it radiated in three filaments. It was raised, stretched and about ½ inch of it was excised. The wound was treated antiseptically. Patient was discharged well on 3rd January 1895.

Neuralgia of the Crural Nerve.—A man was admitted with neuralgic pain along the crural nerve on the right thigh, leg and foot. He was treated with embrocations, exalgin, morphia injections and electricity, but to no effect. He was discharged on 14th April 1894.

Fatty Tumour.—**K. D.**, aged 60, had a large pendulous fatty tumour about the size of a melon, situated upon the back, of 16 years' standing. For 12 years it was small and stationary, and then increased rapidly during the next four years. On 9th April 1894, the patient was anaesthetised and the growth removed. Although treated antiseptically, the wound suppurated and healed by granulation.

Cystic Tumour.—(1). **V. R.** had a cystic tumour about the size of a supari on the left cheek: the skin was adherent. On the 22nd April 1894, patient was anaesthetised, and the cyst dissected out. While dissecting it, the cyst burst and a cheesy matter exuded from it. A button hole was accidentally made in the skin. Wound healed by first intention.

(2). R. N. had a small cystic growth at the inner angle of the left eye; it was dissected out and the wound healed by first intention.

(8). K. H., child *æt.* 3 years, had a congenital cystic tumour over the left lower lid. The eyeball was absent and the cyst-wall reached quite the apex of the orbital cavity. On 24th January 1895 the child was anaesthetised and the cyst dissected out.

(4). O. B., aged 20 years, had a cystic tumour of the size of an orange over the right external malleolus. Patient had a guinea-worm in this region some two years back. The cyst was dissected, but on 27th January 1895 it consisted of a jelly-like substance with a guinea-worm buried in it.

(5). C. S., aged 30 years, had a cystic tumour of the left thigh about the size of a cocoanut; it was globular, soft and fluctuating, and of 8 months' duration.

On the 15th July the patient was anaesthetised, and a vertical incision was made. The tumour was forcibly separated and burst, a brownish-thick fluid escaping, the cyst-bag was removed *entire*.

ECCIAS (1) A. N. male, had a hard tumour on the left cheek about the size of a lemon; on the 4th August 1894, the patient was anaesthetized, and an incision made into the gum; the growth was shelled out and its cavity plugged with lint. Patient was discharged well on the 16th.

(2). R. S., female, aged 40, had a large growth in the mouth, arising from the side of the upper jaw; deglutition and mastication were difficult. It was removed by evulsion.

Fibrous Tumour.—A. K., male aged 23, suffered from a fibrous tumour of the left parotid of the size of a mango. On the 14th February 1895, A. V.-shaped incision was made over the growth and the tumour dissected, but the wound healed by first intention.

(2). K. R. had an ulcerating growth on the left buttock; the surface of the ulcer was studded with bundles of white fibrous tissue. He had a horny tumour in the same region; it was removed four years ago. The patient was well for about two years, after which the growth re-appeared. Anaesthetised on the 21st January 1895, and the growth removed; wound healed by granulation.

Uterine fibroid polypus.—B. B., female aged 40 years, admitted 25th January, 1895, complaining of a sanaceous discharge from vagina, and anæmia.

On examination, a hard fibrous tumour, about the size of an orange was detected in the vagina with a thin pedicle, embraced by the os, having its origin in the uterus. The tumour was got rid of by an *œtaseur*.

A LARGE AND LONG-LIVED FAMILY.

A CORRESPONDENT writes to the *British Medical Journal*:—There has just died the last of a large family of fourteen—eight sons and six daughters. They all grew up. The youngest died at 23½ years, the oldest at 87½. The total age of the fourteen was 866 years, the average being 61½ years. The eight sons averaged 68 years, the six daughters 60½ years. Ten out of the fourteen lived 50 years and upwards, and their average age was 78½. The respective ages attained were: 25½, 27, 34, 44½, 50, 59, 67½, 71½, 76½, 79½, 79½, 84, 84½, 87½ years. It takes a large and long-lived family to cover a century. The father of this family was married April 3rd, 1795, and the last of his offspring died May 17th 1895.

A MIRROR OF PRACTICE.

THREE CASES OF PROTRACTED LABOR: INSTRUMENTAL INTERFERENCE.

By HARRY GIDNEY, D.M.C.C.

Assistant Civil Surgeon, Massachusetts.

CASE I.—On the 14th April 1894, I was called out to see a patient who was said to be in labor. I went over to the house and found my patient to be a primipara aged 17 years. Married two years. No miscarriages.

Present condition.—Very weak and exhausted. Pulse 132 per minute, and very thready. Respiration hurried. She gave a history of labor having started three days ago. Liquor amnii was evacuated on the previous Monday, labor pains had ceased since Tuesday at 2 P.M. I made a vaginal examination and found the os to be patulous, but dilated only to the size of a wineglass. Fœtal heart sounds were not audible anywhere. From the condition and history of the case, I considered it one of "uterine inertia." I administered chloral hydras 5j., in three doses, with no effect. Nature could not act here, so I decided on applying the forceps. Accordingly, I summoned another medical man in consultation, and the patient was placed under chloroform.

I then dilated the os with Barnes's bags to its fullest extent, and applied the long forceps and delivered the child, which had been dead from all appearances, for at least two days.

The patient being a primipara, I took off the forceps as soon as the head engaged the vagina for fear of rupturing the perineum. The placenta came away 25 minutes after the birth of the child. There was a very offensive smell from the parts, in consequence of which, I used a uterine douche of 1 in 1,000 perchloride, giving a vaginal douche as well. I applied a binder and gave the case in charge of the midwife. The usual mixture of quinine, ergot and digitalis was administered. The parts were douched thrice daily with 1 in 2,000 perchloride and the case made an uninterrupted recovery, being quite well on the 13th day after labor.

CASE II.—I was called in July 1894, in consultation with another local medical practitioner, to see a case of labor. When I saw the woman I found her to be in almost a similar condition as case No. I. Labor had started three days previously. Liquor amnii was evacuated on the 2nd evening of labor. Labor pains had ceased shortly afterwards.

Condition of the patient.—Age about 15 years, of small size as compared with her husband. Primipara. Pulse very weak and beating fast. Patient in an exhausted condition, due to the prolonged labor. The bowels were constipated, and thinking this caused the delay in labor, an enema was administered, but with no effect. On vaginal examination I found it to be a case of vertex iv. The os was dilated to the size of a wine glass. The parts were very warm to the touch.

The fœtal heart sounds were audible, but were very rapid and very weak, indicating failure of the child's heart.

I informed the other medical man that if the case was left to Nature, the patient would undoubtedly die. I therefore strongly advised the application of the forceps.

The patient was put under chloroform; the os dilated to its fullest size with Barnes's bags, the long forceps applied and the child delivered.

The cord was found to be wound round the child's neck, which was at once undone. The face of the child was greatly congested and purple, shewing great difficulty in breathing. He (the child) was placed alternately in cold and hot water, but died 12 minutes after its birth.

As our attention was almost entirely devoted to the child, the mother was left to herself, and when I looked at her, I found to my great surprise, that she was breathless. We immediately resorted to artificial respiration, and after 15 minutes' hard work, resuscitated life. My next thought was towards the placenta.

Half an hour, one hour, two hours had passed, and no placenta escaped. I therefore at once inserted my hand into the uterus and found that the cause of this delay was due to "Hour-glass contraction" of the uterus. I however passed my hand up through the contraction with great difficulty, using a rotatory dilating action, and tore the placenta from its attachments by force. This gave rise, to a good deal of hemorrhage, which ceased after a time.

Sclerotinic acid was then injected hypodermically, as the womb had not contracted to the cricket-ball shape, which sensation is so pleasant to the hand of the accoucheur! A uterine douche of 1 in 2,000 of perchloride was given and also a vaginal douche. A binder was applied and the usual P. P. mixture administered. Ether sulph was injected twice during the operation; the patient was perfectly well on the 15th day after labor.

CASE III.—On Tuesday night of the 19th March 1895, I received a letter from the Civil Surgeon, requesting me to attend a case of labor which was being sent to the Mussourie Hospital for treatment. I at once proceeded there and after a short while the patient arrived. After a careful examination, I elicited the following history from her:—Had one child two years ago; no history of miscarriages; age 32 years; labor pains started four days ago. Lignor annui had escaped on the first morning after labor started.

Present condition.—Very weak and exhausted from the effects of the prolonged labor. Pulse hardly perceptible, thready and irregular. Temperature about 102°F. Respiration hurried and difficult. On examination per vaginam, I found the os to be dilated to the size of a button-hole, or a little larger, but very patulous. The vagina was very hot to the touch. An extremely offensive smell came from the parts.

The case was one of vertex presentation, but as the presentation was high up in the pelvis, I could not discover the exact position of the child's head. The external appearance of the womb was very irregular and inclining more to the left side. This gave me the idea that it might be a case of twins. Great distension of the parts was also present. Her bowels had been moved a few hours before coming into hospital. She also passed urine freely.

The Civil Surgeon, accompanied by another medical man, came in to see the case. A vaginal douche of bichloride 1 in 500 was administered. After a careful examination,

the Civil Surgeon detected a large swelling lying in the posterior part of the pelvic cavity, which prevented the descent of the child's head into the outlet of the pelvis.

As Nature could not act, and as the swelling in the posterior part of the pelvis prevented the use of the forceps, the operation of Craniotomy was agreed upon.

The Civil Surgeon accordingly passed the perforator up, but could not pierce the skull, as the child's head receded higher up on the slightest pressure; this caused much delay. However, the child was steadied externally, and after a great deal of difficulty, the perforator entered into the skull and the brain was evacuated. The different bones of the skull were quite separate owing to the far advanced state of decomposition, being held together merely by the scalp. The crushing forceps were then applied and three bones of the skull extracted, *viz.* the two parietal and occipital.

The forceps was then applied to grasp the remaining portion of the head and so extract the child, but failed to do so, as the parts gave way on the slightest pressure exerted. I was then asked, having the smallest, sized hand, to do what I could. I passed my whole hand into the uterus, and to my great surprise, extracted two of the sternal ribs. I again introduced my hand and pulled down the right arm; a bandage was then tied to the wrist joint and slight traction applied, but as decomposition had advanced too far, the arm got disarticulated at the shoulder joint. I then tried to seize the left hand and by means of the blunt hook drew it out, but this also gave way when traction was applied. I next attempted to seize the legs of the child. I endeavoured hard to push my hand as high up as possible, but was to a certain extent prevented by the projection of the swelling in the posterior pelvic cavity, which was to all appearances an osseous tumour.

After a great deal of difficulty I managed to get the blunt hook round the hip-joint, and by its means drew down the right foot. I then tried to seize the other foot, but my hand was almost powerless by this time, so the Civil Surgeon took up the work at this stage, and by means of traction on the right foot, he drew out the left foot. By using slight traction on both feet the child was extracted, *minus* the remaining part of the skull, which was still in the uterus. The missing bones were the two temporal and the two frontal. (The face came out with the rest of the body). These four bones formed a kind of a ball which could not be got hold of owing to the projection of the bony tumour. I tried to put in the whole of my hand and extract the bones, but could not exercise sufficient traction. After trying all kinds of instruments the bones were finally extracted by the crushing forceps.

The above operation lasted from 10-30 p.m., Tuesday, to 2 a.m., Wednesday—about 3½ hours; the patient being under chloroform during the whole time. Sulphuric ether was injected four times during the operation.

The placenta had not come away as yet, so I put in my hand to extract it by force, but failed owing to the projection of the tumour. The offensive smell from the parts and from the child was the worst that any of us had ever experienced. As the patient was too much exhausted

THE Indian Medical Record.

16th July, 1905.

(SIR WILLIAM ROBERTS, M.D., F.R.S. ON THE
GENERAL FEATURES AND THE MEDICAL
ASPECTS OF THE OPIUM HABIT IN
INDIA) AND THE RECKLESSNESS
OF THE EVIDENCE ON WHICH
HIS CONCLUSIONS ARE
BASED.

THE above heading—in parenthesis—is the title of the memorandum on the medical aspects of the opium habit appended to the final report of the ROYAL COMMISSION ON OPIUM. We have waited patiently for this utterance from the distinguished physician, who was the independent medical expert on the Commission; and judging from what we had gathered from his previous writings, and the kind of evidence laid before him by Indian Government officials, we have in this memorandum just what might be expected. If we have to expose the devious ways of some of those who presented the medical aspects of the opium habit in India before the Commission, and to point out deliberate pitfalls into which the English members of the Commission have fallen on the medical side—for that is after all what concerns us most—SIR WILLIAM ROBERTS will only thank us for candid and fair criticism of what we think, the unstable evidence upon which he has built his report. We are quite well aware that he could not—from his want of personal knowledge of India, its peoples, its Government, and Local Governments and their ways—surmise that he was being misled by the evidence placed before him—facts being sometimes withheld which would change the whole significance of the evidence. But before we consider the memorandum itself, let us ask why SIR WILLIAM ROBERTS was selected as the medical expert at all? A medical expert who is chosen to decide any question in dispute between medical men ought to be one who has not committed himself on either side of the controversy. If a medical man has strong and pronounced views and fixed opinions on one side of the matter in dispute, it clearly follows that he at any rate is not a fit person to adjudicate in such a case. Thus, if SIR W. B. RICHARDSON, who is known to have very pronounced views regarding the effects of alcohol on the human organism, were to be selected as an expert to weigh evidence and finally to write an authoritative report which would settle the scientific social and physiological aspects of the alcohol question, an outcry would immediately be raised that the whole question had been put at the mercy of a bigoted temperance advocate. In the case of the Opium Commission, the medical expert selected should have been as free from partisan views as any expert required to report on the alcohol question. But what are the facts as regards SIR WILLIAM ROBERTS? He occupies the same position, in medical circles, regarding dietetics and food accessories (alcohol, opium, tea, coffee, &c.) as that occupied by SIR W. B. RICHARDSON in regard to alcohol. This will be made very apparent by the following brief quotations from his "*Lectures on Dietetics and Dyspepsia*," published ten years ago. He writes:—"The food customs of mankind

are therefore not to be viewed as random practices adopted to please the palate or to gratify an idle and whimsical appetite. These customs must be regarded as the outcome of profound instincts which correspond to important wants in the human economy." I need hardly say that these customs which are not the outcome of the free choice of the population, but are the consequences of legislative enactments or of religious injunctions, are of no utility as guides in the study of dietetics except indeed as warnings of the mischief that may accrue from ignorant meddling" (Lectures, page 5). Then he says "that the effects (of tea, coffee and cocoa) have not been injurious to the nations of Europe is demonstrated by the continued progress of these nations, and their increasing ascendancy among the nations of the world (page 10). We are amazed at this kind of reasoning as applied to dietetics and food accessories, which in this country (India) must of necessity include opium; and the absurdity of it will appear if we apply this to Asia instead of the "nations of Europe." If we substitute "opium" for "tea and coffee" and Asia for "Nations of Europe" in the above sentence, it would read thus:—"That the effects of opium have not been favorable to the material progress and advancement of Asia (especially India) is demonstrated by her backwardness, poverty, degeneration and continued grovelling dependence among the nations of the world. Indeed by the same process of reasoning China, an opium-enting nation, falls defeated and demoralised before Japan, an anti-opium nation, numerically seven times China's inferior!"

Yet another quotation:—"It would not appear to be the part of wisdom to depart without some solid reason from the dietetic customs of the country. We may be quite sure that the use of meat and of alcoholic beverages and tea and coffee (and now opium) subserve some useful purposes to the human economy, though we in our ignorance may not be able to specify them with precision. These customs are the spontaneous outcrop of natural instincts, and the fruit of an immense experience; and the sanction they derive therefrom constitutes an incomparably weightier authority than any other we possess." (Lectures page 13.)

From these few extracts it will appear that SIR WILLIAM ROBERTS had pronounced and fixed views entirely in favor of such food accessories as alcohol, tea, coffee, cocoa, (and, in India where opium is used, of opium). To select him therefore as the independent unbiased (?) medical expert of the Opium Commission was a wise and discriminating choice by the officials concerned; for he could not undo his lectures, nor reject opinion which had gained for him a certain reputation. The scientific world, however, had it known that these views were the pet theories of SIR WILLIAM ROBERTS would have rejected him as eminently disqualified to sit on any such Commission. Not only was he unfit to sit on the Commission by reason of his published views—these he might have held in abeyance if he chose—but the questions he put, or did not put, to anti-opium witnesses, betrayed his bias from the beginning. The anti-opium witnesses were apparently treated by him with scant courtesy. While the official witnesses, when uttering the merest twaddle and outrageous exaggerations were received with evident appreciation, as witnesses whose authoritative utterances must carry conviction to the most

... mind. As we have said, if the medical expert had been misled, hoodwinked, and betrayed into the error, glaring error, he is not to be blamed, because his knowledge of the people and their environments was of the most meagre and superficial kind. It was not so with the Indian medical and official witnesses; they knew the people, their habits, their climate; and they knew also, Sir WILLIAM ROBERTS'S theories on dietetics. It will not be amiss for us therefore to point out some details which might escape the ordinary reader of the Report, but which are quite known to all who know India and the opium question—details which will confirm all that we have said, and open the eyes of the public to the kind of evidence laid before the Opium Commission.

1.—*Distribution and prevalence of the opium habit.*—Under this head SIR WILLIAM ROBERTS writes—"The dual character of the opium habit, with its medicinal side and its euphoric side, explains some of the irregularities and anomalies in its distribution. The habit prevails in excess of the average among the peasantry in low-lying damp and malarious districts. It also prevails in excess of the average among the Rajputs and Sikhs, and in such cities as Lucknow and Benares, where there is a large class of idlers. In the former case the excess may be said to be due to the solicitations of the medicinal side, in the latter case the excess may be said to be due to the solicitations of the euphoric side of the habits." The term *euphoric*, here used, SIR WILLIAM tells us, means "feeling perfectly well and able to bear pain and anxiety easily." We have been accustomed to look upon opium as possessing two distinct qualities—*anodyne*, *hypnotic* and *astringent*; but here it is divided into the "*euphoric*" and *medicinal* or *antiperiodic*. For it is only its antiperiodic properties that would cause a demand for its use in low-lying, damp and malarious districts. That he had great difficulty in accounting for the peculiar distribution of the opium habit with his own theories before him is quite evident. It was this difficulty that induced him—very ingeniously we admit—to divide the drug into "euphoric" and antiperiodic—the former to suit Rajputana and the Punjab and the latter to suit Bengal, Assam and Orissa. He found that if he ascribed the prevalence of the habit to malaria, the habit was not found excessive in the most malarious districts; and if he tried to limit it to "low-lying and damp" districts, the uplands of Rajputana and the Punjab contradicted his theories. He was compelled very reluctantly to abandon the malarious theory as the only one applicable to the case and ingeniously split up the drug into two divisions that would give some show of plausibility to his theories as to the cause of the peculiar distribution of the opium habit. The striking point in Bengal is, that the most malarious districts show a minimum of consumption, and that healthy districts or provinces in which little or no malaria prevails, are excessive consumers of opium. It was very puzzling. But a man, prepossessed with a theory, is never at a loss! "The therapeutic effects of opium are much alike—tolerance apart—in all persons and in all climates; but it would seem as if only a select portion of the population were susceptible to its euphoric effects." It will occur to the Indian physician that these extraordinary physiological instincts of "a select portion of the population"—so different from European nations—are not only discriminative and selective as regards opium, but that whole provinces and races have developed

the peculiar instinct for appropriating only one side of the drug and that not its anodyne, hypnotic or antiperiodic qualities, but a new quality called "*euphoric*" or "*making to feel well*."—It has not occurred to SIR WILLIAM ROBERTS, or if it has, has been studiously ignored by him—that there are other facts which will satisfactorily account for the seeming anomalous and erratic distribution of the opium habit throughout the various provinces and districts of India. Let one official extract, which was passed by a conscientious official before this Opium Commission was talked of, suffice. MR. A. SYME, for years in the opium district of Gorakhpur, and for a time in charge of the Opium Agency, wrote in 1840:—"The people of the province of the people suffer from the production of opium. Wherever opium is grown it is eaten, and ... it produces the more it is eaten: its pernicious effects on the population of the opium districts, particularly in the neighbourhood of depôts.....one opium cultivator demoralises a whole village." (Hansard, Vol. 68, page 382). If we keep this one outstanding characteristic of opium cultivation before us, viz:—its power of fastening the opium habit upon the people who cultivate it, we have an efficient and reliable solution of the problem of the unequal distribution of the opium habit among the rural populations in India. In considering this question we must not look upon human nature as a sphinx, carved out of stone, neither liable to temptation nor possessing any power of imitation. On the contrary, we must remember that human nature, as it is, has a tendency to fall into habits, good or bad; and that these habits will bear a definite relationship to the proximity, number, and power of the temptations set before it. It will be found, in India that the distribution of the opium habit corresponds generally in rural tracts, with present or past areas of opium cultivation. Thus in Table III of the Commissioner's report, we find *Assam* heading the list for excessive consumption of opium in all the provinces in India. It has 141 grains per head per annum. MR. DRIESSEN, Commissioner of Excise, Assam, tells us "that when we first acquired Assam (I now speak of the Assam Valley) every villager grew his own opium;" and in their report the Opium Commissioners inform us that "previous to 1873—1874, permission to sell opium was granted free of payment." We have here then unrestricted cultivation and free sale of opium in Assam, for how long we do not know. This solves the mystery which so puzzled the expert on the Opium Commission. We in India never think of attributing the large consumption of opium in that unhappy province either to the euphoric or antiperiodic properties of the drug, far less to any instincts peculiarly developed in the Assamese race!

Berar comes next, with an average consumption per head per annum of 91 grains. Berar and the Central Provinces, especially those districts approaching the confines of the Malwa region, were all opium-growing districts prior to the date of annexation in 1854; some time after which the cultivation was stopped, and became limited to the Malwa region. The district of Ellichpur, in Berar, which shows the largest consumption—154 grains per head was an opium-growing district prior to 1854. Here again we see the same cause operating—opium cultivation, leaving its trail of the opium-eating habit behind it. The Bombay province with Sindhi comes next, and the Opium

Commission Report tells us that if we leave out of account the consumption in the city of Bombay, which is 155 grains per head per annum, "we find the high rate of 94 grains per head in Gujarat, where a considerable Rajput population is surrounded by lower classes with a marked habit of imitating Rajput customs;" (page 42, para 49), that is to say, the Gujaratis are a most imitative race. Neither "euphoric" nor antiperiodic, but imitative! As a considerable number of opium-eating Rajputs from the opium growing districts of Rajputana have found their way into Gujarat, the lower classes take opium to imitate them! We do not suppose that the official members of the Commission were ignorant of the following resolution—a trumpet-blast from the Government of Bombay in 1881. "III On the question of the expediency of permitting the cultivation of opium in Sindhu... III. I am at the same time to state that this Government considers there are very strong objections to the introduction of an industry so demoralising in its tendency as opium cultivation and manufacture into a province where it is at present unknown. . . . It has already been tried in Gujarat, and the result was wide-spread corruption and demoralization." Again we must correct the Commissioners. It is no longer "imitating" Rajputs that has demoralised the Gujaratis or caused the excessive consumption of opium in that province; nor is it even their "euphoric" instincts, but simply opium cultivation! This will be still more clearly seen if we compare, as the Opium Commissioner's Report does, the consumption in Gujarat with the consumption in the Kanarese country in the far south of the presidency, far away from the opium-growing centres, where the minimum consumption per head is only 4 grains. Let us now turn to the Punjab with the next largest consumption, viz., 42 grains per head. Dr. WATT states that "with the exception of the Punjab no other British province is allowed to grow the plant save in the tracts that have been brought under the direct supervision of the agencies of Patna and Benares" (East India Opium, p. 36). The Commissioners also admit that "within the Punjab itself no restriction was placed under the Sikh administration on the cultivation of poppy. . . . On the acquisition of the province by the British from the Sikhs, it would have proved a highly unpopular measure to prohibit the cultivation altogether, and in some places the prohibitions would have resulted in serious injury to the cultivators." This clearly and satisfactorily accounts for the Punjab occupying the fifth place on the list of opium-consuming provinces. It is matter for consideration not that the consumption of the Punjab is so high, but rather a matter to be explained why the consumption of licit opium is so low. There are two outstanding facts which meet us here: (1) the opium-growing tracts in the Punjab itself; and (2) the proximity of "protected states (where opium is cultivated) by which the province is bordered on two sides." From these circumstances it becomes apparent that the consumption of licit opium in the Punjab, large as it is—is but a fraction of the actual amount known to be actually consumed there.

The Central Provinces come next on the list, with a consumption per head per annum of 34 grains. Here again we are brought face to face with the same general cause of excessive consumption viz., opium cultivation.

The Opium Commissioner's Report states that "Gujarati consumption is no doubt greater than is shown by these figures. Most of the districts in these provinces were not annexed until 1854, and the free cultivation of the poppy allowed under native rule was not stopped till some time after annexation." But before we leave the provincial averages of consumption let us glance at the North West Provinces and Oudh, and notice the use the commissioner's make of Table III. which shows the consumption of opium in the various provinces of British India, and which we have been examining. They state that "a shop in Oudh for instance, suffices for more than 10 times the population served by one in the Central Provinces, Berar, or Assam, and for double the population for which a shop is provided in the densely-peopled province of Bengal." This is one of the most undisguised official plessantries played off at the expense of the British public, we have seen throughout the Report, and one of those mysterious facts which so puzzled Sir WILLIAM ROBERTS. The explanation of this very anomalous state of things regarding shops is very simple.

The Central Provinces, Berar and Assam were centres of previous opium cultivation—as we have shewn above—which left behind it—as a legacy to these unfortunate races—the opium habit. As opium is no longer grown in these provinces, illicit opium can only very sparingly be obtained in Assam, if at all; but is obtainable to a considerable extent in the Central Provinces and Berar, as they are in the vicinity of the opium-growing region of Malwa. In the province of Oudh, on the contrary, every district cultivates opium, or is permitted to do so, at this moment. Indeed, were it not for the large towns and villages existing in the districts of Oudh, where the inhabitants cannot have poppy fields of their own, there would be no need for any shops selling licit opium in the whole province. In paragraph 47 of their Report, the Commissioners seem to have realised the absurdity of para. 43, and return to the same subject with a little less confidence, adding, "but in the North-West Provinces the average annual consumption is returned at 24 grains per head. In Oudh, during Native Rule, which only ended in 1856, there was no restriction on cultivation or sale. The corresponding figure there falls to 15. It must be borne in mind, however, that the cultivation of poppy is permitted under license in every district in Oudh—a fact which in some degree accounts for the small consumption of licit opium. The existence of a large city in which the traditions of a corrupt Mussulman court have not yet been obliterated, explains probably the high rate of consumption in the Lucknow district, where it is seven times as high as that in the rest of Oudh." Lucknow's evil pre-eminence—asccribed to the "traditions of a corrupt Mussulman court"—has 106.8 grains per head per annum, while Calcutta with the high moral traditions of the British rulers of India, has a consumption of 276 grains per head! This seeming abnormality, which not even a Member of Parliament like Mr. MOWBRAY, could account for—an ordinary ryot from Oudh would explain in two words—illicit opium.

We do not for a moment suppose that the official members of the Commission were ignorant of this simple explanation, when they were manipulating the Report: that would be insulting their intelligence and general culture; but then, it was no part of their duty to play into

the ranks of the anti-opium party, and therefore they could not be expected to obtrude their own individual opinions upon the Opium Commission! The city of Lucknow is surrounded with opium-growing districts, and opium is constantly being smuggled into the city in large quantities: this accounts not for the high rate per head in Lucknow as compared with opium-growing rural Oudh, but the low rate in Lucknow as compared with Calcutta, where opium cannot be obtained, except through licit shops. The marked lowness of the rate per head in the opium-growing districts of Oudh, the Commissioners themselves explain by the fact of the widespread opium cultivation in every district. You might as well expect that a baker who has a bakery and shop of his own for selling bread should go for his daily supply of bread to the opposition Government shop across the road, as to expect that the opium cultivators of Oudh would use licit opium. The cities, however, require a word of explanation. The off-scourings of small towns and rural districts gravitate to the cities, where immoral influences and pressure for existence lower the moral tone of the people. If an Indian city has facilities for checking illicit traffic in opium, and is far removed from the opium-growing centres, the percentage of consumption per head will be high, as in Calcutta; but if, on the other hand, the city has an excessively large number of opium-consumers, and is surrounded by opium-growing districts—such as Lucknow,—the amount of licit opium consumption will only represent a fraction of what is actually consumed. Thus we think we have shewn from the Commissioners' own Report that the *distribution and prevalence of the opium habit* all over rural India bears no relation whatever to its medicinal qualities or to its "euphoric" side: but it does bear a distinct and definite relationship to the past and present cultivation of poppy in these districts and provinces, where it is excessively used. The seemingly anomalous consumption in the cities also, as we have seen, can be accounted for on other and more rational grounds, the far-fetched "*traditions of a corrupt Mussulman court*." How startling then in the light of the above facts is the following statement from the pen of the independent medical expert with the Opium Commission:—"The therapeutic effects of opium are much alike—tolerance apart—in all persons and in all climates, but it would seem as if only a select portion of the population were susceptible to its euphoric effects!" Let it be once again stated that the physiological effects of opium on the human organism—tolerance apart—are the same in India and Europe, and no Royal Commission will ever alter the facts which medical science has established upon the solid basis of practical experimental research and observation.

II. *Opium as a household remedy.*—As far as Bengal is concerned, SIR WILLIAM ROBERTS, in considering opium under this head, seems to have pinned his faith to Dr. CROMBIE of Calcutta, and we must therefore—to do him justice—give the quotation in full, upon which the opinion of the medical expert rests. Before doing so we quote one sentence to shew where the evidence he relies on comes from: "The testimony of some of the most experienced members of the Indian Medical Staff in regard to the value of opium as a domestic remedy, was impressive." Then after quoting Dr. BUCHANAN he gives the following most touching and convincing picture of Eastern Bengal

by Dr. CROMBIE: "I think it desirable," says Dr. CROMBIE "that the Commission should know something of the conditions of life obtaining in a place such as I have lived in for a great part of my service in India. I refer to Eastern Bengal (Dacca). There, when a man wants to build a house, he first of all digs a tank and with the earth from which he has dug the tank he raises a mound and on the top of that he places his house. The elevation of that mound depends entirely upon the height to which the annual floods rise. The floods rise with fair regularity, but sometimes they go two or three inches higher than the average, and then the inhabitants of those houses have to live on rafts inside their houses and their cattle are tethered up to their bellies in water. These people have generally no boats. They paddle about on rafts made of plantain trees and the boys go to school in what I call wash-hand basins. They are earthen *gumlas*. The boys squat at the bottom of the *gumla*, and paddle to school. This is the only means of communication. Some of those dwellings are extremely isolated. There may be only one household within four or five miles. There is no native doctor or dispensary within five or ten miles of them. I am convinced that to deprive these people of the possession of opium, except under medical advice, would be a terrible and wanton cruelty. It is the only medicine of any value that is available to them, and if you deprive them of it, I should not like to be one of those who do it." There were many strange and startling statements made before the Opium Commission, but we are not aware that there has been any more misleading and more mischievous statement than the above, made by a responsible medical officer of the Bengal Medical Service. SIR WILLIAM ROBERTS could have found out for himself whether the inference implied—but cautiously not stated—that opium was a household remedy in Eastern Bengal, was true or not by referring to Table I at the end of the Report, shewing the distribution by districts, of the opium habit in British India. We infer that Dr. CROMBIE was not theorising, or speaking beyond his own personal experience when he wrote the above, and his experience we understand, was almost entirely confined to the Dacca district; for he says: "I was for a long time Civil Surgeon of Dacca, but for only seven years of that period did I actually reside in Dacca. It will be observed that Dr. CROMBIE assumes that (1) the waterlogged ryots of Eastern Bengal were sorely in need of opium, and (2) every household possessed it as a household remedy, because of the malarious conditions under which they lived. It is very evident that if they possessed opium, its use must be to cure or ward off malaria. It will astonish SIR WILLIAM ROBERTS to learn that of all the districts of Eastern Bengal, Dacca and Myensing have the least average consumption per head per annum. The mere fact that Dr. CROMBIE mentioned the circumstances, and inferred that opium was a household remedy in Eastern Bengal, was enough. No further investigation was necessary. His statements must be true! We admit the conditions described in Eastern Bengal point to an intensely malarious region; but we deny that opium is even known as a prophylactic, much less used as a household remedy among the ryots of Eastern Bengal. We challenge Dr. CROMBIE to prove or even to assert in the presence of competent medical men who know Eastern Bengal, that opium is used by the ryots as a household remedy. The statistics

point all the other way. We have the following figures in the Opium Commission's Report, which prove that of all the districts of Eastern Bengal, Dacca and Mymensing have the lowest consumption of opium—5.1 and 5.8 grains per head per annum respectively. The following undoubtedly malarious districts have all a low average:—

| Yearly average consumption of licit opium per head. | | | |
|--------------------------------------------------------|-----|-----|--------------|
| Murshidabad ... | ... | ... | 23.5 grains. |
| Burdwan ... | ... | ... | 22.8 " |
| Rungpur ... | ... | ... | 20.6 " |
| Dinajpur ... | ... | ... | 14.4 " |
| Rajshahi ... | ... | ... | 13.8 " |
| Naddea ... | ... | ... | 10.9 " |
| Mymensing ... | ... | ... | 5.8 " |
| Dacca ... | ... | ... | 5.1 " |

In the first six districts in the above list, malaria prevails, but if we would represent them in the order of malarial intensity, we must reverse the list and begin with Naddea, Rajshahi, Dinajpur, Rungpur, Burdwan, and Murshidabad. In these districts, some of which we know intimately, we are absolutely certain that opium is *never used either as a prophylactic or as a cure for fever*. How then does it come to pass that where Dr. CHROMBIE tells us it is a household remedy, the consumption should be less than in those intensely malarious districts, where it is *not used either as a household remedy or as a prophylactic against malaria*? We must remember that these averages do not mean what they say. To shew the utter absurdity of the average consumption, as applied to Eastern Bengal, we proceed as follows: On the authority of SIR WILLIAM ROBERTS we know that "among the easier classes the daily allowance frequently runs up to 20 and 40 grains and sometimes far beyond this." Let us take an average of 33 grains per day for well-to-do men who take opium in the Dacca District. In one year, one such consumer would use 10,950 grains. This would be equal to 2190—5-grain-consumers; and if we divide these 2190—5-grain consumers into the population (2,420,656) we have 1,106 consumers of 30 grains per day, consuming the whole of the opium sold in the district of Dacca— $1106 \times 30 \times 365 \times 12,110 \times 700$ grains or say 12,100,000 grains in round numbers. But Dacca has six large towns with an aggregate population of about 11,000. We find that well-to-do opium eaters are found chiefly in these towns; and no one would charge us with defaming their fair name for moderation in the use of the drug, if we distributed these 1,106 opium consumers among that urban population. Thus we see that the whole of the opium used in Dacca is consumed by a few moderate well-to-do consumers, who are scattered chiefly in Dacca itself, and the five smaller towns throughout the district.

We could not ask SIR WILLIAM ROBERTS, and Dr. CHROMBIE his most reliable medical authority, where the ryots of Dacca are to obtain their opium? Not from illicit traffic in the drug, for it does not exist there to any appreciable extent; not from Government licensed shops, which do not exist outside the towns, and have only sufficient opium to supply 1106 moderate consumers who are well-to-do, scattered in the city of Dacca, and the five larger towns. Thus we see that the "wanian crutch" threatening the Eastern Bengal ryot is not that he will be deprived of his opium, but that

he has never been adequately supplied with it, and has never taught to use it, under any of the distasteful conditions that constitute his hard lot.

From whatever point of view we look at the evidence tendered by Dr. CHROMBIE to the Opium Commission, we are struck with amazement at its audacious inaccuracy. The abnormally low average consumption of 5.1 grains per head per annum in Dacca, when compared with 747.4 grains in some districts in Assam might have caused him to hesitate before he committed himself vaguely to inferences which he might have known were grossly misleading. We know the cause of the excessive consumption in Assam viz., the legacy left by opium cultivation, but why is the average in Dacca so low, if it is so intensely malarious and opium is used as a household remedy there? The answer, as we have shewn above, is plain—the statement cannot be true of Dacca, nor is it true of any district in Bengal.

III. Opium as a remedy and prophylactic against malaria.

That Sir WILLIAM ROBERTS was supplied by some of the official witnesses, with evidence that, to say the least, did not tend to lead him to clear views of the opium habit in relation to malaria, the following extracts will prove:—He says "*The evidence laid before the Commission showed that in some districts of India the local consumption of opium bore a close relationship to the greater or less prevalence of malaria in the localities*," and as proof of this he quotes in a foot-note the following:—"A striking illustration of this was given by Mr. WACE, Commissioner of Patna Division. He stated: 'The effect of climate in regulating the use of opium is curiously illustrated in the district I know best, viz., Bhagalpur. The district is cut in halves by the Ganges. The southern part is dry and healthy, the eastern half of the northern part is damp and malarious, especially where it borders the Kosi River. The three most malarious thanas—Kishen gange, Mudhupur and Partang, with a population of 27 per cent of the whole district, have 42 per cent. of the opium shops licensed for the whole district. The three driest thanas of the south containing a population of about $\frac{1}{3}$ of the damper thanas have only two opium shops, while the three damp thanas have seventeen. We find on enquiry that in the sub-division of Bhagalpur, south of the Ganges, where Mr. WACE says only two opium shops were required on account of its healthiness, that for upwards of twenty years opium cultivation has been carried on there and in the adjoining district of Monghyr.'

Whether southern Bhagalpur is healthy or unhealthy has nothing to do with the prevalence of the opium habit there. The people of that sub-division are largely given to the use of opium, but as they cultivate it themselves and as their neighbours—the ryots of Monghyr—do the same, it would have been useless to plant opium shops among them. Yet this is the kind of evidence upon which SIR WILLIAM ROBERTS relies for upholding the theory that opium bears a "*close relationship to the greater or less prevalence of malaria in the localities*."

It is not creditable that the medical expert on the Opium Commission should have allowed himself to be so completely under the influence of Government officials as to state that "*in this general sense there was a consensus of (official) opinion that opium was an indispensable medicine*."

of the prophylaxis against the prevailing complaint (malarious fever) of the people of India." It is vain to point out that the consumption and distribution of opium throughout India bear no definite relation whatever to the existence even, far less the intensity, of malarial fevers in different parts of India. Thus we find Darjeeling with a consumption of 15.7 grains per head per annum has no malaria, while Jalpaiguri, including the deadly feverish Dooars, has only 6 grains. Balasore in Orissa—the seat of previous opium cultivation—considered one of the healthiest districts in Bengal, shows a consumption of 88 grains per head, while the terrible swamps of Eastern Bengal (as described by DR. CAMMERMEYER, viz., Dacca and Mymensingh together consume only 5.4 grains per head. Simla with a small poppy cultivation—which should reduce the average considerably—far above the malarious zone, shows a consumption of 136 grains per head, while Dinajpur and Rajshahi, the two most malarious districts in Bengal, show together only 1.38. These figures show clearly that malaria has absolutely nothing to do with the prevalence and distribution of the opium habit: indeed, as we have already shown, two thousand well-to-do opium eaters would account for all the opium consumed in any one of the malarious districts we have mentioned; and we should find them all scattered in towns where opium shops only exist.

That these anomalies in the distribution and consumption of opium in the districts of India escaped the keen observation of the medical expert we do not assert; but that they would not fit into his malarial theory he clearly perceived from the beginning, and hence we have the new "euphoric" quality and marvellously-developed physiological instincts, by which whole races—"select portions of the population"—found that they were susceptible to the "euphoric effects" of opium!

To support the anti-malarial theory, which neither facts nor figures would lead themselves to, SIR WILLIAM ROBERTS revives old and discredited views of opium in which it was found that opium contained "narcotine" which he credits with distinct "antiperiodic properties," of which Patna opium contains 6.36 per cent. It would therefore require 16 grains of crude opium to equalise the minimum dose, 1 grain of narcotine, which was found effective in arresting the paroxysms of intermittent fever, and 48 grains to equalise the maximum dose. From these calculations* it may be inferred that only large consumers of opium would be absolutely protected against the malarial poison.....During an attack of ague, quinine is given in doses of five to ten grains; but a dose of two grains taken daily is held to be effective as a prophylactic against recurrent attacks. The same rule probably holds good as regards opium and its alkaloid narcotine. On this view it may be assumed that moderate consumers of opium, although not rendered absolutely immune against the malarial poison, would be more or less protected from recurrent attacks,—and if the attacks returned they would return less frequently and with mitigated severity. These particulars I think, adequately explain why opium-eaters are not altogether exempt from malarial fevers. The smaller consumers either lack the means or they lack the tolerance which

would enable them to take opium in sufficient quantity, to contain an efficient protective dose of narcotine.

The question was often mooted before the Commission why it was that, notwithstanding all this evidence in favour of opium in malaria, medical men in India do not prescribe opium for the cure and prevention of malarial fevers? The explanation is very simple in the light of the facts disclosed above. Opium contains morphia as well as narcotine. "This puts an absolute bar to the use of opium as a general antiperiodic. It could not be so used without the most serious risk of narcotic poisoning."

It is assumed in the above quotations that (1) moderate consumers of opium are protected against recurrent attacks of fever; and (2) that excessive consumers are rendered immune against the malarial poison. Both these statements every Indian physician knows to be without any foundation or truth. Opium-eaters enjoy no immunity from malarial fevers, nor are their attacks less frequent or less severe when they do occur. To obtain any benefit from the minute quantity of narcotine contained in opium a patient must at least take 16 grains in a dose to "be effective in arresting the paroxysms of intermittent fever," and probably at least 4 grains—a poisonous dose—to act as a mild prophylactic. Let a case be supposed. A patient has an attack of quotidian fever; he has had previous experience, not once but many times, that the fever cures itself or wears itself out in the system. We come and tell him of the antiperiodic properties of opium and assure him that although a $\frac{1}{4}$ grain dose—with which he must begin—will not arrest the paroxysms of fever, yet when he by daily practice acquires tolerance for 16 grains per day a few years hence, (if he can afford to buy that quantity), he will be protected. Or, if instead we tell him that 4 grains a day, which can be taken after 6 months' habitual eating, will not prevent you having fever; but the attacks, when they return, will "return less frequently or with mitigated severity." Would that dim prospect of cure even if it were true, (which it is not), induce the fever-stricken ryot to begin opium? Again we are informed that morphia in opium "puts an absolute bar to the use of opium as a general antiperiodic." "It could not be so used without the most serious risk of narcotic poisoning." If morphia contained in opium "puts an absolute bar to the use of opium as a general antiperiodic" in the hands, of skilled medical men, how is it so safe, so efficient, and so highly commended when left in the hands of ignorant natives of India? And if physicians never prescribe it for malarial fevers, how have the people, who do not see it, found out its antiperiodic properties? One does not know which to admire most: the lack of reliable information regarding the Bengal ryot and his habits for which he is not to be blamed, shown by SIR WILLIAM ROBERTS, or the ingenuous confidence with which he elaborated an illusive theory, which, a visit to any malarious village in Bengal with a non-official interpreter would dispel for ever.

The first of the new buildings included in the scheme for reconstructing the Calcutta Medical College is well in hand and making rapid progress. It is to be for the Anatomical Professors' Department, and will consist of a large and suitable dissecting room and lecture theatre.

HOW TWO PRESIDENCY SURGEONS COUNTERSIGNED A PRIVATE PHYSI- CIAN'S CERTIFICATE.

JUDAS, ON MEDICO, as his veiled personality preferred to shrink itself behind, said in his letter to the lay press, that the signing of medical certificates with private physicians was "simply a matter of fees."

Now we are not inclined to retort by reiterating such a charge against the other side; for we feel that any such insinuation of dishonesty, whether levelled at official or non-official physicians, would fall to the ground as a base and cowardly libel.

It is however extremely ill-advised and ill-timed for MEDICO, or the officials who have used this cringing sycophant as a cat's paw, to have aired this question of the counter-signature of independent medical certificates by Presidency Surgeons. The scathing and wrathful denunciations of MR. JUSTICE NORRIS against official methods of signing medical certificates, are still ringing in the ears of the public, and surely the effort to bolster up such an egregious anomaly is as unwarrantable as it is ludicrous.

But there is an ethical aspect to this question of compelling the servants of Government, who are sick and under the care of private physicians, to have the certificates of their family doctor countersigned or endorsed by a Presidency Surgeon, and it is this. A Presidency Surgeon may have a grudge against a practising physician, and when his medical certificate is brought to him for endorsement by a patient, he either refuses to sign it, or places upon it some remark which both nullifies the intention of the certifier and at the same time discredits not only the practitioner's ability as a physician but his veracity as a man. To say that all Presidency Surgeons would be guilty of such meanness would be a cruel and unjustifiable slander, but that there are "exceptions," the following story only too truly reveals. Here is the story:—

A Government official was for some time under the treatment of a private practitioner, and very little improvement resulting, the patient was taken to hospital and after a few weeks was discharged, somewhat improved in health. Shortly after, his strength seemed to be very markedly lowered, and it was thought advisable to send him for a change. A medical certificate to this effect was granted by his family doctor to enable him to apply to Government for leave.

Here is a verbatim copy of the certificate:—

"Certified that Mr. _____ is suffering from material fever and anæmia, and that he is unable to attend work for three months. Mr. _____'s health is greatly impaired and he requires rest and a change to ensure recovery.

(Signed) _____ M.D.

Calcutta, _____

The following note was scratched across this certificate by the countersigning Presidency Surgeon:—

"Fourteen days will be sufficient if he is properly treated.

(Signed) _____

Surgeon-Lieutenant-Colonel.

This endorsement is so extraordinary and so remarkable that it is well to record the patient's own statement

regarding it. He said: "I took the certificate to Dr. _____. He read it, shuffled about in his seat, looked very angry, did not feel my pulses nor ask me any questions about my health, but scratched the remark across the certificate and gave it to me. As I left the office, Dr. _____ called me back, took the certificate from me and scored out the word "properly" and then returned it to me." The patient finding the certificate practically nullified by Dr. _____'s remark on it, brought it back to his family doctor, who re-wrote it and told his patient to go to any other Presidency Surgeon he pleased. He did so, and this second officer, after carefully examining the patient, countersigned the certificate, accepting the family physician's recommendation that the patient needed and should get three months' sick leave, and what is more he got it. Be it noted that the certificate was countersigned by the second Presidency Surgeon within twenty-four hours of the first man's remarkable judgment by *instinctive intuition, not by examination*. There can be no two opinions about the conduct of Presidency Surgeon No. 1. It is a case of personal feeling and vindictiveness. We have abundant evidence of a documentary kind to prove this charge. We have before us the original certificate with that remarkably unprofessional remark on it. Clearly this "officer and a gentleman" prostituted his official position to vent his private animosity against a brother professional, and such conduct cannot be too widely exposed, nor too strongly condemned. It shews forth the unenviable position in which private physicians are placed in their professional relations with their official brethren, and emphasises the immediate and imperative necessity that exists for the Government to rescind the rule which compels the countersignature of independent certificates by State practitioners. The Government has a powerful weapon in its hands to prevent the mis-use of their rights and privileges by independent physicians in simply ruling that any practitioner discovered in the crime of granting a false certificate, shall be publicly gazetted as debarred from the further granting of such certificates for all State purposes.

COMMENTS AND NEWS.

METHODS OF SLAUGHTER ABBATOIRS.

A METHOD of slaughter having three such important advantages as (1) the infliction of the least possible pain, (2) of being hygienic, and (3) of being economical must commend itself to the very favorable consideration of consumers of animal food. We find from the *Birmingham Medical Review* that DR. DEMBO'S investigations lead him to the conclusion that of all methods in vogue, the Jewish method of slaughter is the only one in which all these advantages are combined. As to the first of these advantages in the Jewish method, the carotid arteries being directly opened by a cut with a sharp knife, a very large volume of blood is at once poured forth; the supply to the brain is almost completely stopped; there is an extremely rapid fall of blood-pressure, and consciousness is wholly and invariably lost in from three to five seconds. By no other method now in use is there less pain caused in cutting through the sensitive structures of the neck. The method of slaughter adopted in places where the blood is collected for the manufacture of albumen, is transfixion of the neck with a

State of danger, leaving the weapon in the wound. Death is slow, in transition and cutting through the soft substances, as adopted in England, the large arteries are less efficiently opened than by the Jewish mode. In the neck-stab method adopted in Russia, Germany and other countries, the knife is thrust between the occipital bone and the first cervical vertebra and the spinal cord completely severed; but Dr. DEMEO finds that the medulla is not destroyed in the thrust, and the animal remains fully conscious, while the further operations are being performed. The method of stunning cattle with a mallet or polcaze, then making a hole in the skull and destroying the medulla, and subsequently opening the carotids, is the most prolonged of all methods. Moreover, it is an exception to find an animal stunned by a single blow, five or six blows being required on an average, and twelve minutes may elapse before unconsciousness is produced.

The hygienic advantage is that by the Jewish method the vessels being most completely drained of their blood the meat is less prone to decomposition. In all the other methods there is produced a greater or less degree of vasomotor paralysis, and for this reason materially less blood escapes. Furthermore in the Jewish method *rigor mortis* begins in less than half the time required in other processes and lasts longer by several days, and the early onset and long duration of *rigor mortis* is stated to be essential for the provision of wholesome meat.

The economic advantage of the method lies in the fact that the blood-vessels being most completely emptied, the weight of the meat is diminished.

ANTI-VENENE: IMMUNITY TO SNAKE-BITE.

AFTER six years' hard work and numberless experiments on cats, grass-snakes, guinea-pigs, a horse, rabbits and white rats, with the poison obtained from the most venomous snakes of Africa, America, Australia and India, with a view to establish or break down the hypothesis of "producing by successive inoculations a degree of resistance against the toxic effects of snake-poisons," Professor THOMAS R. FRASER, M. D., informed the Royal Society of Edinburgh that his investigations had clearly proved that beginning with a trifle below the minimum lethal dose and gradually increasing the quantity of the toxic substance at each inoculation, an animal could be rendered proof (immune) against the poisonous effect of venom sufficient to kill fifty non-protected animals of the same size, and that the blood-serum of animals thus protected against large lethal doses of venom was able, when injected into them, perfectly to prevent lethal doses of the most poisonous of serpents from producing death in non-protected animals. To this serum he applies the name of *Anti-Venene*, and claims an equal result from it, whether in solution, natural, or dried in *vacuo* and then dissolved in water. The snakes with whose venom he made his experiments were:—*Crotalus adamanteus*, *C. durissus*, *C. horridus*, (the most venomous of the rattlesnake tribe), *Dinemia superciliosa* (the brown snake), *Naja tripudians* (cobra-di-capello (India) *Trigonoccephalus contortrix* (the copper-head), *Vipera arctians* (puff-adder), *Aspidelaps lubricus* (the night adder), *Naja haiti* (yellow cobra or Olopatra's asp), *Sepeidon hermaphrodites* (Ringi Hais Slang or Kinkas) *Pseudochis purphyriacus* (Australian black snake), and *Vipera cerastes* (vipers). All of which are the most deadly of all the known poisonous serpents; but as in their natural states the venoms are in constant inactivity, owing to the various quantities of water they contain, constancy in experiment was obtained by drying them in *vacuo* over sulphuric acid, and then dissolving a weighed quantity of the impalpable substance in distilled water for the inoculations. Though the results so far obtain-

ed have been highly satisfactory with the brute creation, still, further experiments have to be made with a view to their effect in man and also to discover the real constituents by which the antidotal effects were produced, and this because there are and must be limits to this curative power dependent on (a) the susceptibility and idiosyncrasy of the person bitten, (b) the quantity of the poison injected by the bite and taken up into the system, (c) the special antidotal activity of the *Anti-Venene* that is used, and (d) the duration of the time during which the toxin has had an opportunity of exerting its poisonous action before the *Anti-Venene* is administered.

HAVE YOU BROUGHT MY FEE?

It is said of a certain Calcutta Professor of Midwifery, whom India's great comic vocalist, DAVE CARROW, styled "The Deliverer of Bengal," that whenever he was asked to see a patient, his first question was, "have you brought my fee?"

Dr. B. JONES of Leigh, writing to the *British Medical Journal*, apropos the above subject, says:—

"Many years ago a certain man went from Jerusalem to Jericho, and happened with disasters that are, I hope, well known to all of us, and certain religious professors who found him half dead on the road, passed by on the other side. But one good Samaritan took him to an inn and paid the charges of the landlord for looking after him—in advance

"Now-a-days the Priest and the Levite would have run, if convenient, to the nearest doctor and requested him to be the Good Samaritan, and would probably vilify him, either publicly or privately, or both, if he did not at once drive off to the accident, whatever other claims he might have upon him at the time. The greater the profession of benevolence, the greater the horror at the request of the doctor for that 'tuppence.'

"I doubt not that most members of our profession, indeed all, do their neighbourly duty as well and as frequently as any other member of the community. The rub comes in where we are expected to act vicariously for anyone who chooses to call upon us for this purpose. To such we may very well say, 'Where is your tuppence?' I make it a rule never to pay any attention to casual messages or urgency calls unless to my own patients, or when given by some one who is prepared to pay my fee.

"If we would only assert ourselves a little more, and let people understand that we must be paid for our services the same as any other profession, the less difficulty there would be in obtaining our rights. We have done so much gratuitously in the past, that people forget we have our bills, rent, rates, and taxes to meet the same as others. In cases of emergency, calls by police, or anyone else, a good working policy is to ask, 'Where is the tuppence?'

THE TREATMENT OF MALIGNANT GROWTHS BY TOXINES.

Dr. WILLIAM COLEY has continued to prosecute his investigations of the treatment of inoperable malignant tumours with erysipelas toxins. The method of treatment has now been improved by using the serum of the horse rendered immune to erysipelas. This does away with the severe reactions and depressing effects that follow the injection of the toxins, but the relative value of the serum and of the toxins has yet to be determined. His successes may be tabulated thus: In one case of recurrent carcinoma of the breast treated with the toxins for several weeks, the growth was evidently checked, though there was no decrease in size. Five minim injections of the erysipelas serum given for two weeks had no apparent effect on the tumor. The second case was one of the largest carcinomas ever seen by the doctor, and which was

proved to be a continuous by microscopic examination. The serum injections were employed and improved method in a few days. The injections were kept up for several weeks and the improvement continued. Toxins were then substituted for the serum to note comparative efficacy. The tumour shrank in size. Large doses were then employed and a mass of tumour tissue of considerable size sloughed away, and in the next three months was reduced to one-half its original size.

Case No. XI (carcinoma of neck and sternum) under treatment with the serum: tumour slightly decreasing in size. Case IV.—Rapidly growing epithelioma of lower jaw treated with the mixed toxins of erysipelas and bacillus pyridiglossa injected into the chin every 24 or 48 hours. The ulcer entirely healed in three weeks. Seen nearly eight months later; there was no evidence of the cancer remaining and the skin had regained almost a normal appearance.

Professors RUDOLPH EMMERICH and HERMAN N. SCHOLL, M.D., have also been experimenting on the cure of cancer with erysipelas serum. These gentlemen find that the serum from inoculated sheep is more powerful than that of other animals. The results of their experiments in a number of cases lead them to say that "we possess in erysipelas serum a specific for cancer."

THE PLACE OF BACTERIOLOGY IN PRACTICAL MEDICINE.

ADVERTING on the rather heavy mortality in the Brisbane Hospital for sick children, DR. A. J. TURNER complains that over one-third (i.e., 308 out of 2,314 cases) of the cases treated and nearly two-thirds (i.e., 201 out of 939) of the deaths were due to the invasion of specific bacteria, such as staphylococcus and streptococcus pyogenes, which accounted for the following deaths:—pneumonia 25, typhoid 7, diphtheria 120, tetanus 3, tuberculosis 20, or a total of 201, of which considerably more than a half was due to the encroachments of the bacillus diphtheria, of which he observes that as membranous tonsillitis has sometimes been mistaken for true diphtheria, which latter cannot easily be diagnosed in its early stages as to whether the impending disease may be mild or virulent diphtheria, or any other form of bacillary disease, many of whose attenuated varieties are serologically indistinguishable from the virulent form. We know practically nothing as to why it should be so; but we do know that there is an essential similarity of all bacterial poisoning and of its dependence on chemical bodies termed toxins; while a large number of pathogenic bacteria produce within the diseased animal body an antitoxin which is specific and capable of neutralising the toxin that excited its formation; but neither acts on nor kills the bacilli themselves. If a healthy animal be carefully injected with a toxin, the dose of which is gradually increased at each injection, a stage will be reached when the animal becomes refractory or immune to large doses of toxin, which at an early stage of the attack (or experiment) would have certainly proved fatal. And in the blood of the artificially immunised animal will be found a body (i.e., anti-toxin) capable of destroying, neutralising or in some way rendering harmless, the specific toxin produced by the bacillus in natural attacks of the specific disease in other animals. But to be of positive value in successful treatment the gravity of the case must not be dependent on conditions, such as tubercular pneumonia, which are due to secondary affections, and are not affected by the antitoxin, which should be given as early as is possible, and in full and large doses, while there should be no hesitancy, to resort to tracheotomy or tracheostomy to relieve respiratory obstruction, if be present. Though life may be saved and cures effected,

and the immunity produced by the antitoxin is only temporary, surely lasting for months, and disappearing as the antitoxin is excreted from the system.

MEDICAL AND SURGICAL WORK DONE IN DHOROJI, GONDAL STATE, KATTYAWAR.

DR. MULSHANKAR DAMODAR sends us the following statement of work done at the Sir JAMES FRASER'S Hospital, Dhoroji, during the first decade of His Highness' regime from 1884-85 to 1893-94.

Patients Treated.

| Years. | Males. | Females. | Children. | Total. |
|---------|--------|----------|-----------|--------|
| 1884-85 | 6,724 | 2,504 | 5,477 | 14,705 |
| 1885-86 | 7,188 | 3,060 | 6,439 | 16,687 |
| 1886-87 | 7,634 | 3,538 | 7,324 | 18,496 |
| 1887-88 | 8,423 | 4,270 | 8,197 | 20,892 |
| 1888-89 | 7,298 | 3,718 | 7,781 | 18,797 |
| 1889-90 | 7,984 | 3,858 | 7,948 | 19,735 |
| 1890-91 | 8,264 | 4,141 | 8,016 | 20,421 |
| 1891-92 | 8,484 | 4,687 | 9,121 | 22,292 |
| 1892-93 | 8,423 | 4,592 | 8,647 | 21,662 |
| 1893-94 | 9,201 | 5,040 | 8,856 | 23,097 |

Surgical Operations Performed.

| Years. | Major. | Minor. | Total. |
|---------|--------|--------|--------|
| 1884-85 | 49 | 361 | 410 |
| 1885-86 | 73 | 494 | 567 |
| 1886-87 | 20 | 639 | 709 |
| 1887-88 | 40 | 640 | 680 |
| 1888-89 | 29 | 590 | 619 |
| 1889-90 | 32 | 649 | 681 |
| 1890-91 | 45 | 578 | 623 |
| 1891-92 | 64 | 661 | 725 |
| 1892-93 | 54 | 697 | 751 |
| 1893-94 | 58 | 836 | 894 |

During the first quinquennium the hospital was in charge of DR. HARI BHICAJI NAIK, and during the second, in charge of DR. MULSHANKAR DAMODAR TRINEDI.

NOTHING NEW UNDER THE SUN.

DR. H. B. EVANS, writing to the *Medical World*, makes the following quotations:—

Subcutaneous Injection in 1604.—"Went with MR. PIERCE, the surgeon, to see an experiment of killing a dog, by letting opium into his hind leg. He and DR. CLARKS did fail mightily in hitting the vein, and in effect did not do the business after many trials; but with the little they got in, the dog did presently fall asleep, and so lay till we cut him up."—Pepys's Diary, Vol. II., p. 126.

Aqua.—There cannot be any doubt as to the advantage of boiling suspected water before using it. This was well known to the ancients. HERODOTUS, writing of a period about 550 B.C., states that the King, when on campaign, was supplied with abundance of water from the river Chaspeus, previously boiled, and stored in silver vessels.

Removal of the Vermiform Appendix.—MR. BRADLEY of Manchester, in operating for the relief of a strangulated inguinal hernia, found the vermiform appendix lying in the opening, perfectly black and apparently lifeless, and accordingly removed it by means of a catgut ligature. At the end of a week, the patient appeared tolerably well, but imprudent eating induced severe vomiting, and he eventually died from exhaustion.—*British Medical Journal*.

In 1617 FABRICIUS used metal wire for bone-sets.

In 1646 PROF. BRUNSON used silver wire for animals, before DR. BINE graduated.

STATISTICAL VALUE OF DEATH-RATE.

Death statistics are always misleading. To be of any statistical value, they should be worked out with due consideration to local conditions. DR. MAJOSLM MORRIS makes some very valuable remarks in the *Practitioner* on the manner of arriving at death-rates. A high death-rate in a place may not mean local unhealthiness; and unwarily, circumstances may make the death-rate of a healthy locality compare unfavorably with that of a place less healthy. For instance, the tendency to death is greatest at the extremes of life, and the female death-rate is generally lower than the male. In considering therefore the ratio of deaths to population, due allowance should be made for local peculiarities in age and sex distribution. Again it is unfair to charge the healthiness of a town having a work-house, an asylum and several hospitals with all the deaths occurring in that town. It is the unhealthiness of the outlying places to which, perhaps, is to be correctly attributed, much of the mental and physical ailments which have swelled the death-rate of the town, and it would be misleading to include all the deaths occurring in its charitable institutions, in the death-rate of the town itself. Callings and occupations of the inhabitants moreover, influence the death-rate of a place; and as weekly, monthly, quarterly and annual rates vary with the season, epidemic prevalence, etc., decennial rates should be considered in gauging local healthiness or otherwise.

PATIENT FLOCHING.

SAYS the *Medical Times and Hospital Gazette*:—"The ethics of the profession are being gradually broken down and scattered to the winds, especially the laws which are supposed to govern the relations of medical men in regard to visiting each other's patients. Some physicians or surgeons holding a public appointment as medical officer of health, surgeon to the police, physician or surgeon to a railway, bank, or insurance office, seem to regard themselves as above all ethical laws limiting their action in regard to the patients of other medical men: although such a one is the first to cry out if another doctor is called upon to visit one of his private patients. He readily pays 'surprise' visits to the patients of other doctors, and reports thereon without a word of apology. Recently the London School Board decided to appoint medical men to visit and examine children whose parents send medical certificates stating their unfitness to attend school. One would think that it would be difficult to get medical men to undertake such work. Not so, however: the appointments are eagerly sought after, and it is said that the official doctors to the Board detect a large number of cases in which the medical certificates do not accurately describe the actual state of the patient."

Does this paragraph smite the consciences of some official patient floggers in Calcutta?

THE CLINICAL THERMOMETER IN THE DETECTION OF THE FIRST SYMPTOMS OF PULMONARY TUBERCULOSIS.

As in the "incubation" or, as some folks erroneously term it, the "pre-tubercular stage," when tubercular nodules are just beginning to form, it is next to impossible to examine the expectoration microscopically for confirmation or indication of this affection, because it is more than possible that the patient may spit up catarrhal discharge and thus provide correct diagnosis and line of treatment of the disease in its embryonic state, and thus prevent tubercular involvement. DR. C. W. HERNIMAN notes that the ordinary *bulb thermometer* affords the quickest and surest index to tubercular infiltration, as a rise of temperature of from 1°F to

1.5°F at some period of greater or less duration, every 30 days during a fortnight of close observation may, when associated with loss of weight and vitality, be safely regarded as the first symptom of pulmonary tuberculosis, even though there has been no accompanying cough and expectoration and though physical examination gives negative results. He therefore advises to guard against the accident of wrongful diagnosis by watching the temperature record of the patient for a period of two weeks, during which all habits of accidental elevation are eliminated and the patient instructed not to carry his exercise or occupation to the extent of physical fatigue during the "temperature test."

SANITATION IN BURMA.

In his general remarks, DR. SINCLAIR draws attention to some of the insanitary conditions which tend to increase the mortality. Among the Burmese there is, generally speaking, no rational idea about sick-nursing, and practically no suitable diet for the sick. The average Burman has a decided aversion to milk, assigned to his desire not to rob the calf of its proper food. When prevailed on to accept this best of all diets for the sick, he prefers the milk of the goat to that of the cow. He objects also to eggs. Then his clothing is generally insufficient, especially in the rains and cold weather, while children run about naked at all periods of the year. Fevers and bowel complaints are a natural consequence. Among insanitary habits requiring correction, DR. SINCLAIR includes not weaning children till about the age of two. There is no doubt that the mortality among Burmese children is very high, and the wonder is that it is not even higher, seeing that so many Burmese houses are situated in swamps, and that the children are never properly clad or fed.

THE USES OF MEDICAL SOCIETIES.

DR. X. C. SCOTT, of Cleveland, O., in his presidential address said: "All medical associations, should be carried on for the purpose of elevating the profession and producing a beneficial influence upon its members, and also that they may meet face to face and thus learn to know each other personally and better. They should elevate personal character, afford protection to professional interests, and advance personal attainments. To be successful the financial affairs of the association should be conducted with the same careful and rigid supervision that pertains to any private business. He thought the idea of reading all papers before the general body, would afford larger audiences, create better and more interesting discussions, and consequently result in greater good to the majority of the members.

DOCTORS AND THEIR BUSINESS HABITS.

THE *Medical Bulletin* thinks that the success or failure of a medical practitioner to gain a fair competence depends on his business habits. To make and to save money, our contemporary thinks that the more exact and methodical a physician is in the handling of his accounts, both as to charges and collections, the more will his professional abilities be respected. It is therefore advisable that a physician make his worth felt by the public in charging only good fees for his services, and in carefully attending to the collection of his accounts. As one's practice is generally among those in moderate circumstances, or among the poor, the instalment system of collection is advised. In large towns this may be effected through a collector working on percentage, and in a small country village this may be attended to by the doctor himself.

DR. GEORGE KING, F.R.S.

In reviewing Dr. KING's report of the Calcutta Royal Botanical Garden on behalf of the Bengal Government,

MR. H. H. RILEY writes:—"DR. KING's singular talent for landscape gardening has enabled him, during the 24 years he has been in charge, to add greatly to the beauty of the garden by skilful grouping of trees and shrubs, and it now ranks high among similar institutions for picturesque scenery, no less than for scientific completeness. Within the past year he has laid the public under a further obligation by bringing out a guide to the garden, the want of which had long been felt."

SUCCESSFUL ACTION FOR MALPRACTICE.

AN action was recently brought against a surgeon of New York for negligence and unskillfulness in the treatment of a case. The witnesses for the defence showed that the surgeon was generally reputed and was professionally highly skilled. The plaintiff dwelt simply on the question of the degree of skill shown in the treatment of the case which gave rise to the action against the defendant. A verdict was given for the plaintiff, and was upheld on appeal, as it was held that the general character and repute of a surgeon does not affect the question of neglect of or malpractice in a particular case.

DEATH OF SURGEON COLONEL J. M. COATES, M. D.

It will come as a very sad surprise to hundreds of our readers to learn of the sudden death of DR. JOHN MARTIN COATES. He succumbed to an attack of cholera on the 10th July 1895. Few men were so universally loved as DR. COATES, and his death casts a gloom over many grateful hearts.

THE HOBBY OF COUNTERSIGNING CERTIFICATES.

The *Darjeeling News*, referring to the recent correspondence about Presidency Surgeons countersigning the medical certificates of private physicians, after condemning the practice, says:—"There is no test for qualification, but only a personal test, the accident of a doctor being a Presidency Surgeon. If a test of qualification were laid down to entitle a man to sign a medical certificate, that would be another matter. But this is not the case, and how are we to know that the Presidency Surgeon, who countersigns, is a better man than the doctor who signs?"

SHORT ITEMS.

We are very pleased to learn on enquiry that Surgeon-Colonel Cuffe, C. B., Army Medical Staff, whose death was announced in some of the home papers a short time ago, is enjoying most excellent health, in that beautiful Central Provinces Sanitarium, Pachmar.

A Parisian ophthalmologist says that the incandescent electric light is the least harmful to the eyes of all artificial light. Next comes the light of a good kerosine lamp, after that candles, and the worst of all is ordinary gas-light.

Surgeon-Captain H. C. Hodgkins, M.A.S., of the Calcutta Medical College, is gazetted to the rank of Surgeon-Major. We congratulate Surgeon-Major Hodgkins on this well-deserved honor paid to him by the State.

Dr. Evans, attached to the 20th Bombay Infantry, met with a severe accident on the 24th June, when out with the Nussirabad hounds, breaking his left arm and sustaining a severe shaking.

Dr. P. Hahir met with a carriage accident on the 28th June. He was driving and the dog-cart overturned and threw him out. It is gratifying to learn that, beyond a sound shaking, he has nothing serious to complain of in connection with the mishap.

The *British Medical Journal* says:—"We do not consider it would be unprofessional for a physician or surgeon's name to appear at the top of his prescription paper; and, in view of the illegibility of many signatures, it would have distinct advantages. It is a common practice amongst members of another profession—that is, solicitors."

The Lee-Metford rifle is pronounced unfit as a weapon of warfare, as its stopping power is unsafe. Its bullet may pass through your enemy, but he advances all the same, onto you down though he may fall after finishing you.

Several cases of typhoid fever, which have occurred lately in Simla, are attributed by Dr. Cunningham to the sale of impure milk brought in from villages in the surrounding Native States.

We regret to announce the death of M. Verneuil, the *doyen* of French surgeons. He passed away in ripe old age, full of honors and surrounded by troops of admiring friends, having filled all the higher offices of his profession in Paris.

Dr. William Gilbert Grace, M.B.C.S., the Champion cricketer of England, is to have a national testimonial. What will English doctors in India give towards it? The *British Medical Journal* has opened a list. Send in your shilling.

The Legislature of Pennsylvania has decreed that the oath taken on the Bible by kissing the book, shall be dispensed with. The Governor of the State has indicated that he will approve of the enactments to that end.

In the recent Dublin case of wrong diagnosis, where Dr. Hadden was fined, an appeal has been lodged against the judgment. The medical profession in Great Britain supports Dr. Hadden.

"When a man's down, kick him and keep him down." This seems to be the policy that the authorities are adopting towards Surgeon-Major Clarence Smith, the hero of the phantom kiss case.

Surgeon-Major Henry John Carter, F.R.S., of the Bombay Service, died in England on the 4th May, aged 82 years. He was a well-known scientist.

Somebody says, and has put it in print, that more physicians commit suicide than the members of any other of the learned professions.

Answering a recent interviewer, Dr. Lillian Hamilton of Cabul, said she "doctored men and women equally." This marks a new era in Oriental social life.

A reference has been made to the Principal Medical Officer, Her Majesty's Forces in India, as to the desirability of adopting the Pasteur filter for British troops.

The Prussian Government expends over \$30,000 a year in support of the laboratories connected with the medical department of the University of Berlin.

The General Medical Council has granted £3,000 as its share in the cost of preparing the new British Pharmacopoeia.

A monument to Father Damien, the "apostle to the lepers," has been erected in Louvain, Belgium, where he was born.

In Sweden ten years of study is incumbent on every medical student.

Use black pins in surgical dressings; they will not rust and can be more readily seen.

OUR LONDON LETTER.

(From our own Correspondent.)

The first flash of medical news in one of the evening papers relates to a strange, though not unique, occurrence that has taken place at the Borough of Portsmouth Infectious Diseases Hospital, Milton. It appears that a young man suffering from scarlet fever was admitted to the institution. The patient, however, left the hospital early the next morning and returned home. He was eventually taken back by the authorities. Culpable negligence of the nursing staff must be our verdict on this scandalous matter.

In order to give our Indian readers some idea of how their fellow-students and practitioners are faring in the mother country, we must record first the death of a former well-known member of the Indian service, viz., HUGH FRANCIS CLARKE CLEGHORN, M.D., J.P., LL.D., F.R.S.E. He was born in Madras in 1820, educated at Edinburgh and St. Andrews Universities, was a pupil of the renowned Professor SYME and one of the house surgeons to Edinburgh Infirmary. He graduated in 1842 and returned to Madras in 1842, where 12 years later, he was appointed Professor of Botany, passing the most active years of life in the I. M. S. In 1855 he was busy organising a forest department, and then became Commissioner for the conservancy of forest trees, &c. In 1869 he retired from the Indian service; his labors in this department being officially acknowledged in terms most complimentary. On his return to Scotland he was *pro tem.* Professor of Botany at Glasgow. He settled at Strathvie, Fifeshire, giving himself up entirely to his favorite botanic pursuits. He became a member of the Edinburgh Botanical Society, a Fellow of the Linnean Society, and was President of the Royal Scottish Arboricultural Society.

Mrs. GRIMWOOD, well known in Indian circles as the heroine of Manipur, was married here in London to MR. ANDREW, paper millowner of Carshalton, Surrey.

The new Bill for the Registration of Midwives, *anent* which so much heated discussion has arisen in various professional coteries, is not of sufficient interest to Indian readers for us to enter upon a lengthy disquisition on it.

MR. H. HARBEN, M.P., has contributed £1,500 to the Dental Hospital in Leicester Square.

The Glasgow students have united to present a gold watch to DR. YULE MACKAY, their Professor of Embryology.

We are gratified to hear that MR. THOMAS SMITH, Senior Surgeon to St. Barts, has been made Surgeon Extraordinary to H. M. the Queen, in the room of the late Sir WILLIAM HAYORY, F.R.S., Bart. of glorious surgical fame.

One of our medical contemporaries accuses a pharmaceutical journal of tempting chemists to prescribe by printing a weekly column of select prescriptions for divers ailments. Male apothecaries are being opposed by a lady gynecologist, who has somewhat daringly affixed a brass plate (on which the word "Miss" is very prominent) to each of the house doors in a well-known Dublin Square.

DR. MACARTHY'S JOURNALING to our notice the dangers of morphine and its uses in gynecological practice. He

probably thinks to arrest the spread of morphinomania. This however is fostered by the chemist, and not the physician. DR. BROOKS has demonstrated the treatment of wounds by immersion in oxygen gas, and explained how he cured a case of poisoned wound and another of ulcers *arabica* by means of a rubber cap placed on the head and pumping in the gas, with marked success. Neurotrophic disorders, such as *springo myalis*, RAYHAUD'S disease, aoromegaly, &c. are coming in for a large share of medical attention. DR. HALL has exhibited an interesting case of actinomycosis fungoides. The patient being a man aged 52. He had complained of pain in his arms and legs two or three years back. A swelling, the size of a goose egg, appeared at the right hip, then one followed on the right elbow. Since this time the tumours have appeared on the feet, head and face, breaking down and discharging in about six months. In October 1894 he began to complain of sore-throat. Tumours can now be seen in the pharynx and on the arytenoid cartilages.

A case of *Filaria Loa*, a disease common in Calabar, has been shewn by Dr. A. ROBERTSON. It appears to be a common complaint among the negroes, but is rare among the white visitors to these parts.

Scarlatina Maligna has been met with lately in Battersea and South Lambeth, the death-rate being very high.

On consulting the Medical Register there appears to be an increase of 10,000 more practitioners holding British qualifications than there were 20 years ago.

A leading contemporary advises the use of *Salol* in scarlet fever with a strictly milk diet (*Quicoe*). The drug which is an active intestinal antiseptic, useful in pernicious anemia, dysentery, and even cholera, is best given in capsule or tabloid form; it is then absolutely tasteless and very active; the dose should be from 7½ grains to 30 grains daily according to age.

Mrs. ELEANORA I. FLEURY, M.D., R. U. I., gold medalist, has been appointed assistant physician to the Richmond Lunatic Asylum, Dublin. Mr. H. ALLINGHAM is now Assistant Surgeon to St. George's Hospital.

A case of chronic insanity, after every remedy failed, has been cured by *thyroid feeding*.

A fearful case of black witchcraft comes to us from Ireland, where a woman was boiled or roasted to death under the impression that she was "fly" or a witch of vicious predilections.

If report is correct, the grandest "old man" in medicine is DR. BONSY of Havre, who is stated to have practised in India. He is 103 years of age, and is still hale and hearty. Another, 105 years old, is MR. W. SALMON, J. P., D. L., of Penlayne Court, Glamorgan, S. W. He became M. R. C. S. in 1809.

MR. W. TOWERS SMITH, a specialist in Foods and Obesity, has passed away.

The Annual Meeting of the British Association will be held this year at Ipswich about September next. A small book on the preservation of health in the Far East has been published by DR. MEANS of the Church Missionary Society, which proves interesting, and contains some excellent diagrams on prophylaxis, &c.

Dr. R. W. FELKIN tell us "that with selected men, one might colonise even West or Central Africa;" but we cannot forbear from stating that this wide-spread and loose generalisation does not accord by any means with our own experience in West Central Africa.

Dental caries has been extremely prevalent here of late years, and seems on the increase.

The Chemical Society have awarded the Faraday Medal to LORD RAYLEIGH for his discovery of "Argon."

A new element, called "HELIUM," has aroused some attention in Chemical circles.

We are pleased to relate that SIR JOSEPH FAYRER has recovered from his late severe and protracted illness.

We are delighted to inform our readers that Mr. CHRISTOPHER HEATH has been elected President of the R.C.S., England.

There are now two Royal Commissions in working order: One on the aged poor, and the second on "Vaccination."

HARVEY's masterpiece "*Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*" has been reproduced in *facsimile* from the Frankfurt edition, published in 1628.

Numberless accidents with paraffin lamps continue to be reported in London.

SIR JOSEPH LISTER, F.R.S., has been welcomed at Marlborough House by the PRINCE OF WALES who presented him with "the Albert Medal" from the Society of Arts, in recognition of his services in Antiseptic Medicine.

Current Medical Literature.

MEDICINE.

Obstruction of the Bowel Tested by Electricity.

ALTHAUS reports a case of a man fifty-four years old, who for three months had suffered with obstinate constipation. At the time of coming under observation the bowels had not moved for ten days, and the abdomen was distended and tender. The appetite was lost, and a condition of collapse existed, with sunken face and small feeble pulse. The introduction of the long tube proved unavailing, and electric treatment was resorted to. An insulated sound, with a fine metallic end, was introduced into the rectum, and a moistened conductor applied to the abdominal parietes, chiefly in the region of the sigmoid flexure. Through this circuit a primary faradic current was passed, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. In the course of the day a copious intestinal evacuation ensued, with wonderful relief to all the symptoms. During the next two days the bowels acted ten times, and in the course of a week the patient appeared quite well.

A second case, in a woman fifty-seven years old, is cited, in which a like result was obtained from similar treatment.—*Brit. Med. Journ.*

Bright's Disease without Albuminuria.

MASON, after referring to the recorded cases, relates three cases of unquestionable nephritis occurring in patients aged fifty-eight, nineteen, and fifty-nine years respectively. In the first case there never was albuminuria, while the

patient was under observation. In the second case a chlorotic girl was admitted with many of the symptoms of Bright's disease, and yet there was no albuminuria. Two years later she was readmitted, when albumin was present in the urine. In the third case the patient had been under treatment with Bright's disease and albuminuria. Later she was admitted with influenza. The albumin entirely disappeared, but the symptoms of Bright's disease persisted. The author draws attention to the fact that the quantity of albumin present may be of little prognostic importance, and he relates an illustrative case. Albuminuria is a feature of secondary importance in Bright's disease; it may occur in health, it may exist in large quantities in cases of Bright's disease with few symptoms, and it may be absent in uræmia. As DIEULAFOY says, the important thing in renal disease is not so much what passes out in the urine, as what remains behind in the body.—*Arch. Gén. de Méd.*

A Rare case of Stupor with Forced Feeding for nine Years.

GADELIUS had an interesting case under his care,—that of a tailor, aged 32 years, an assiduous workman, slow, taciturn, but amenable to reason. Insanity of persecution developed, the prominent symptoms being anxiety and insomnia, with neglect of his person and refusal to take food. When spoken to he invariably answered in an undertone, "Fine weather, to-day," and, later on, "I do not know." Forced feeding was carried on uninterruptedly, from April 24, 1883, to February 12, 1892, the body-weight increasing during this period from 46 to 73 kilogrammes (101 to 160 pounds). From April, 1883, to May, 1886, he remained in a condition of complete stupor and amnesia. The author considers the prodromic delirium as a quasi-paranoid psychosis in a degenerate subject, and regards the case as a psychosis of exhaustion, being practically a condition of syncope from beginning to end. On awakening from the stupor the patient had lost most of his former knowledge of things and places, but soon recovered it.—*Hygæia*.

Facial Paralysis.

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DR. TURVIER gives an interesting account of a case where surgical interference caused complete disappearance of all symptoms of the disease, which had resisted all other kinds of therapeutic treatment. The patient was a young woman, aged twenty-seven, who had suffered with the malady for seven years and its beginning was marked by a cystic enlargement of the right lobe of the thyroid gland, which was soon accompanied by severe exophthalmos and the other usual symptoms. Iodine injections, tincture and electricity treatment were all tried in vain, and the patient became so ill that she could not work, and in addition, showed signs of distress from the pressure which the enlarged thyroid gland was producing on the trachea. It was then decided to perform partial thyroidectomy, and this was successfully accomplished, with the result that the general symptoms rapidly disappeared, the woman now being in good health and able to work. The exophthalmos also almost entirely disappeared, and no

After unpleasant symptoms have followed. Dr. TUPPER believes the success of the operation to lie in partial removal of the gland, which he thinks gives better results, both immediate and future, than complete extirpation of the organ.—*Lancet*.

The treatment of Hydrocele.

The treatment of hydrocele by the injection of irritating substances is sometimes very painful. The use of cocaine as a local anesthetic in the ordinary way not being free from danger, NICOLAI has since 1889 employed the following method:—The usual antiseptic precautions being taken, the hydrocele is punctured with an ordinary trocar; about one-third of the fluid is allowed to flow away, then 3 to 4 c. cm. of a 1 per cent. watery solution of cocaine is injected into the bulk of the serous effusion remaining in the sac, through the canula of the trocar with a syringe of the capacity of 4 c. cm. The scrotum is then gently manipulated, and after waiting four or five minutes the remainder of the serous fluid is drawn off. Next tincture of iodine, either pure, or mixed with one-third of water, according to the age of the hydrocele and that of the patient, is injected. The scrotum is again gently manipulated, and after four or five minutes the iodine is allowed to escape. The operation done in this manner is painless. The method has the advantage of utilizing a natural aseptic fluid as the excipient of the injection. Moreover, the quantity of cocaine absorbed by the serous surface is less in the case of a serous solution than of a watery solution of the medicament of the same strength.—*Brit. Med. Journ.*

The cure of Lachrymal Obstruction.

IN cases of lachrymal obstruction, it is not always easy to ensure its permanent patency after operation. The *New York Medical Record* describes a method, devised by DR. WALTER VILAS, of Texas, which, it is said, has been tried in a number of cases of lachrymal obstruction and abscess with unfailing success. The *modus operandi* is this: After the preliminary slitting of the canaliculus, a small-sized probe, armed with a canula, is passed and withdrawn, leaving the canula *in situ*, through which is pushed a small piece of silkworm gut, its lower end being brought out through the nose. Having withdrawn the canula, a split aluminium shot is fastened to the lower end of the gut, and the latter is pulled up until its further progress is obstructed, when another shot is fastened to the gut at its exit from the upper opening and the superfluous gut cut away. The shots and gut are left in place until the case is cured.—*Medical Times*.

Laparotomy and penetrating wounds of the Abdomen.

FILIPPO reports a series of 13 cases of abdominal injury with penetration in which laparotomy was performed. In six cases in which the operation was merely exploratory, speedy cure resulted; in five, one or more wounds of the intestines or stomach were found, and of these 1 died, owing to the fact that one wound was overlooked at the time of operation. In two cases the left lobe of the liver was injured, and there was copious hemorrhage; of these, 1 is alive, the other died 38 days after operation from pneumonia. The author concludes that laparotomy, as a rule, gives good results in these cases, if done early. During the operation all the abdominal viscera should be most carefully examined, lest any small wound be passed by. Lavage of the abdominal cavity with some antiseptic is useful. Subsequent ventral hernia is not to be dreaded, whether incision is made *en site* or in the linea alba. Suppuration of the abdominal walls is a not an infrequent sequel after laparotomy for penetrating wounds.—*Brit. Med. Journ.*

OBSTETRICS AND GYNECOLOGY. The use of the Sponge Pessary During Menstruation.

DR. ALEXANDER DUKES says:—"Having for some time past recommended married patients to introduce a clean, soft sponge, squeezed out of warm solution of Condy's fluid into the vagina during the catamenial flow, and thus dispense with the use of diaper or sanitary towel. I find the consensus of opinion decidedly in favor of the proceeding. The sponge should be cone-shaped, longer than broad, and a stout cord passed through (forming a loop when ends are knotted), through which a finger can be passed when it becomes necessary to withdraw the tampon.

During normal menstruation nature is endeavouring to throw off a certain quantity of redundant blood, &c. Why this should be retarded in its exit, and collected in either a diaper or sanitary towel, and kept in close contact with the external parts to the wearers' annoyance and discomfort, I fail to see, when by the simple plan described, all this can be avoided, natural flow accelerated, and the external parts kept from contact with the discharge. The sponge needs only to be hidden in the vaginal passage (thus giving room above it for some of the menses to collect) and by its own absorption and swelling, seal the canal and thus prevent any external flow. I direct the pessary to be removed every six hours, and the vagina then thoroughly syringed out with hot water. The sponge to be thoroughly cleansed by the wearer in weak saline solution squeezed out of Condy's fluid and re-introduced.

By this means I am assured the "period" is shortened by two or three days in many cases, and the comfort experienced, more especially by ladies travelling, (having no soiled diapers to carry with them or 'sanitary towels,' for which an opportunity to destroy does not always offer)! This must be my excuse for calling attention to, and recommending the proceeding to the consideration of the profession."—*Med. Press and Circ.*

Removal of the Uterine Appendages for Nervous Diseases.

Most gynecologists are at the present time averse to removing the ovaries and tubes for nervous diseases; but DR. W. H. BAKER thinks that disease of the uterine annexa is sometimes an unrecognised cause of neuroses. He is of opinion that the adhesions resulting from attacks of localised pelvic peritonitis is a not infrequent source of nervous disease, either from the presence of the pseudo-membranes in themselves, or from the interference which they offer to the functional activity of the organs involved. The extent and form of the pelvic disease is no indication of the character or degree of the resulting nervous manifestation. A most thorough pelvic examination should be made under anesthesia in every obscure case of nervous disease in a woman, occurring during the age of menstrual activity. Finally, DR. BAKER thinks that some forms of uterine disease may occasion an amount of nervous disturbance which may require the removal of the healthy Fallopian tubes and ovaries, as the simplest and safest means of cure.—*Boston Med. and Surg. Jour.*

When shall Celiotomy be performed in the Treatment of Puerperal Sepsis?

DR. EDWARD P. DAVIS discusses this important practical question, and comes to the following conclusion:—"When the uterus and vagina have been thoroughly disinfected by the curette and douche, and the lymphatics of the pelvis and peritoneum have been well drained by saline purgatives, if the patient does not improve, the question of Celiotomy must be considered. If an infective focus can be distinctly outlined under anesthesia, it must be, if possible, extirpated. Vaginal

Celiotomy will often drain a pelvic abscess with the least disturbance, and give valuable time for an improvement in general condition. If vaginal hysterectomy, with removal of the tubes and ovaries can be performed, it may supplement the vaginal drainage of an abscess. If it cannot be performed, Suprapubic Celiotomy, with amputation or extirpation of the uterus and appendages, and vaginal drainage, is indicated. Celiotomy, flushing with saline solution, and drainage are also indicated in commencing infection of the general peritoneal cavity.—*American Journal of Obstetrics*.

Later evils following Retention of Placental Relics.

HARTMANN and TOUPET have prepared a valuable monograph on the changes which nonseptic fragments of placenta may undergo when left attached to the uterine wall. These changes are (1) simple sclerosis of the placental tissue, (2) benign deciduoma, (3) hydatidiform mole, and (4) malignant deciduoma. In all, chorionic villi are to be detected by aid of the microscope. By benign or innocent deciduoma is understood the true "placental polypus" and more sessile growths, in which there is distinct evolution going on in the chorionic villi, and no sclerosis of the connective tissue. The growth does not, however, recur after thorough removal. The authors relate a case where, as usual, the prominent symptom was frequent metrorrhagia. IEGARS and LEVI (*ibid.*) describe a very distinct case of placental polypus, with the same symptoms. The malignant deciduoma which HARTMANN and TOUPET term "chorioncell sarcoma," and the hydatidiform mole, are, in their opinion, related. In the latter, so long and so well known to the obstetrician, just as in the former, which appears to be a disease but recently recognised, the growth tends to invade and even perforate the uterine wall. In these graver, as in the less serious changes in retained placental tissue, uterine hæmorrhages are always an early and prominent symptom.—*B. M. J.*

Analysis of 6,777 Cases of Midwifery.

DR. J. F. W. ROSS gives an analysis of 6,777 cases of midwifery which his father had conducted. He referred to many interesting features connected with the cases. Although a busy practitioner, the late Dr. Ross kept a full account of all the important items connected with each case. The mortality of mothers was 89, the largest losses being from two epidemics of puerperal fever. The reader traced the disease in its course through each epidemic, and showed how careful his father was in regard to cleanliness and change of apparel in those pre-antiseptic days. He had made two runs of 650 cases without a death. There were 16 deaths from placenta prævia. There were 19 cases of version. There were 5,409 head presentations, 148 breech, 58 foot, 5 breech and foot, 25 face, 7 brow, and 34 arm and shoulder. Forceps were used 491 times. Latterly he had used them oftener, with a lessened mortality rate and a less number of lacerations of the perineum. He believed the forceps properly used were conservative to the perineal body. Chloroform was used in 455 cases. There were 48 cases of retained placenta, and 27 perineæ were torn.—*Canadian Prac.*

Indications for Induction of Abortion.

DR. JEFFE, from a study of the literature of the last ten years, fixes the indications for inducing abortion as follows:—

Absolute indications: 1. Uncontrollable vomiting of pregnancy. 2. Encarceration of the gravid uterus. 3. Obstruction of the pelvic outlet by tumors or exudates. 4. Progressive and pernicious anemia. 5. Grave chorea.

Relative indications: 1. Great contraction of the pelvis with the conjugata vera below 5 cm. 2. Pulmonary emphysema with signs of degeneration of the heart. 3. Nephritis. 4. Chronic heart disease. 5. Other general diseases of the

mother which would jeopardize her life at the time of delivery.

He holds that a conjugata vera of 6 cms. and advanced pulmonary tuberculosis should not be regarded as indications for abortion. He does not think it just to sacrifice a future life for one that is "certainly lost."—*Med. and Surg. Rep.*

Occipito-Posterior Positions.

DR. VAN PRYMA concludes an article on this subject as follows:—In conclusion, I wish to emphasize the vital importance of recognizing the position in vertex presentations; to insist that, as a rule, cases of occipito-posterior position should be left for the natural forces to effect delivery—forces which, in the vast majority of cases, are not only entirely adequate, but in these cases will accomplish the object better than the most skilled instrumental or manual interference.

"Further, I desire to maintain that flexion is essential to natural rotation; that rotation is frequently delayed until the head is very low; that the character of the pains is a very important factor; that the complete anesthesia, the mobility of the head, even when deep in the excavation, is often quite surprising that in occipito-posterior position the blades of the forceps must be applied well forward to insure a firm hold; and that, after the head reaches the perineum, extreme flexion must be maintained until the occiput has passed over the perineum; and, lastly, that no hard-and-fast rules can be formulated to cover all cases, but that much must necessarily be left to the judgment of the operator, based on a consideration of all the conditions involved."—*Buffalo Med. and Surg. Journ.*

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PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The Normal Absorption of Fat and the Relation of the Pancreas to Absorption of Fat.

DR. VAUGHAN HARLEY, in experiments made to determine the relation of the pancreas to the absorption of fat in dogs, which are recorded in the current number of the *Journal of Physiology*, pursued the following plan:—The animals were kept fasting for two days and the bowels were daily washed out with an enema of hot water, a small glycerine enema being subsequently given to effect the expulsion of the water. On the third day the pancreas was removed under an anæsthetic, the enemata being continued for two days. These animals were compared with other that were intact. Each set of animals were then supplied with a measured quantity of warm milk, and after a certain number of hours, varying in different cases, the animals were killed and the entire contents of the stomach and intestines separately analysed. In the intact animals the maximum rate of absorption of fat occurs about seven hours after the ingestion of food, for normally a dog absorbs from 9 to 21 per cent. of the total fat given in from three to four hours, from 21 to 46 per cent. in seven hours, and 86 per cent. in eighteen hours. In a normal dog the passage of fat from the stomach varies with the individual as well as with the time allowed for digestion, but in eighteen hours the whole has entered the intestines. In dogs which have had the pancreas removed the quantity of fat given is not only again recovered, but a surplus is found which is probably derived from the intestinal secretion or excretion. Dr. VAUGHAN HARLEY also found that the capability of passage of fat from the stomach is very much delayed by the extirpation of the pancreas, such dogs only passing in seven hours from 9 to 22 per cent. through the pylorus instead of, as in normal dogs, about 86 per cent.—*Lancet*.

Preservation of Urine for Examination.

In order to arrive at the true condition of a sample of urine, the earlier it is examined the better. It is, however, sometimes impossible to obtain it for examination for many hours, or even days, after it has been passed, and it is then often entirely changed. Various substances have been recommended as anti-ferments and preservatives, but all have objectionable features. Accident recently led us to try *Thymol*, and the results were as gratifying as they were unexpected. Though the substance is well-nigh insoluble in water, and a crystal added to urine remains unattacked, so far as appearances go, for days, a very minute quantity of it sufficed to preserve a couple of ounces of urine apparently unchanged for several days.—*Med. News*.

Method of Making a Permanent Dry Brain Preparation.

DR. ALFRED W. CAMPBELL gives the following method:—

1. As soon as possible after removal from the cranial cavity, the brain is stripped of its membranes and placed in a saturated solution of perchloride of mercury (seven and a half per cent.), care being taken to avoid distortion of its configuration. In this solution it is allowed to remain for forty-eight hours, at the end of which time its shape will be fixed.
2. Wash in water and then harden in methylated spirit for from three to five weeks. (It is better that the spirit be changed two or three times during this period.)
3. When quite firm, immerse in oil of turpentine and place for three days in an incubator heated up to 45°C.
4. Change into melted Cambridge soft paraffin, and allow to remain in the incubator just above the melting point of the paraffin for from four to five days.
5. Extract, cool in water, clean away all the paraffin from the surface and sulci of the preparation, and finally apply a thick coat of spirit varnish.
6. The brain can then be freely handled, and may further be painted with the usual mixture of oils, colors, turpentine, and gold size.—*Liverpool Med.-Chirur. Journ.*

A new Procedure for Studying Tubercle-Bacilli in Sputum.

SPENGLER recommends the following procedure for the detection of tuberclebacilli in sputum: To the sputum in a beaker are added an equal quantity of luke-warm water alkalised with sodium hydroxide and from 1.5 to 15 grains of powdered pancreatin. The mixture is well shaken, and from 1.5 to 15 grains of crystallized carbolic acid added, and the whole is placed for three hours in the thermostat. When a sediment has formed, the supernatant fluid is decanted and the examination is made. If the sediment is excessive, water is added, alkaline, if necessary, and the mixture stirred and digestion permitted to proceed. In the course of a few hours a small sediment will have formed, which is again washed and then centrifugated or dried upon filtered paper. In the case of pure cultures of tubercle-bacilli it has been found that protracted digestion results in no harm, but in the case of sputum it is desirable that this be not too long continued.—*Canad. Prac.*

Pneumococci in Hydatid Cyst.

GALLAIRD relates a case under his care in which a large suppurating cyst of the liver was opened and drained. The pus, examined microscopically, was found to contain hooklets and pneumococci, without any other microbes. The patient was not then suffering, nor had he ever suffered from pneumonia.—*Brit. Med. Jour.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.**Small-Pox and Vaccination in Russia.**

RELIABLE statistics relating to vaccination and small-pox are not often forthcoming in this country. This renders the following figures even more valuable than they would otherwise be. The figures were collected by Dr. A. N. SOTIN and published by him in a dissertation to the St. Petersburg Academy last year. He was led to collect the statistics in the following manner: The *colod*, or subdistrict, of which he was in charge, lay in the western corner of the Mologa *uyezd* or district, in the government of Yaroslavl. Observing that an epidemic of small-pox was approaching from the east, DR. SOTIN personally examined every child under fourteen years of age in his district before the disease arrived. The total number of children examined was 1564, distributed amongst 665 families, and in thirty villages. He found that 1035 had been vaccinated and had visible scars; 75 children formed a second group of doubtful cases, which were said to have been vaccinated, but in which no scars were visible; and 434 had never been vaccinated. The small-pox arrived and a widespread, though not very fatal, epidemic resulted. It was then found that of the 1035 "vaccinated" children only 16 or 1.3 per cent. had contracted the disease; of the 75 "doubtful," 35, or 46.6 per cent. suffered; while of the 434 "unvaccinated" children as many as 244, or 56.6 per cent. caught the disease. In other words, the unvaccinated suffered to an extent forty-five times as great as the vaccinated. Further, it was observed that in 189 families all the children were unvaccinated, and in these families if one child sickened with the small-pox the disease spread (with only seventeen exceptions) to every other child in the house. On the other hand, in houses where some children were vaccinated and others not, the disease always attacked the last, and the first escaped. DR. SOTIN believes that there is no danger from vaccination performed during a small-pox epidemic, but that general vaccination will with certainty cut short an epidemic, and that the immunity following vaccination does not last more than eight years, at the end of which time revaccination is necessary.—*Lancet*.

Period of Infection.

THE Pennsylvania State Board of Health has adopted the following regulations in the diseases mentioned below:—

Small-pox.—Six weeks from the commencement of the disease if every scab has fallen off.

Chicken-pox.—Three weeks from the commencement of the disease, if every scab has fallen off.

Scarlet-fever.—Six weeks from the commencement of the disease, if the peeling has ceased, and there is no sore nose.

Diphtheria.—Six weeks from the commencement of the disease, if sore throat and other signs of the disease have disappeared.

Measles.—Three weeks from the commencement of the disease, if all swelling has subsided.

Typhus.—Four weeks from the commencement of the disease, if strength is re-established.

Typhoid.—Six weeks from the commencement of the disease, if strength is re-established.

Whooping Cough.—Six weeks from the commencement of the disease, if all cough has ceased.

Under judicious treatment the periods of infectiousness may be considerably shortened.

Length of Quarantine.—Teachers, or children who have been exposed to infection from any of the following diseases, may safely be readmitted to the school, if they remain in good health (and have taken proper means for disinfection), after the following periods of quarantine :—

Diphtheria, twelve days ; scarlet fever, fourteen days ; small-pox, eighteen days ; measles, eighteen days ; chicken-pox, eighteen days ; mumps, twenty-four days ; whooping-cough, twenty-one days. Adults may be readmitted immediately, if they disinfect their clothes and persons.—*N. Y. Med. Rec.*

Variety in Diet.

A NUMBER of facts conspire to throw a somewhat new light on questions of dietetics, or at least to show that these problems are more complex than they have been by some supposed. It has been usual to speak of a "mixed diet," meaning thereby one composed in part of animal and in part of vegetable food, one containing proteids, fats, and carbohydrates, approximately in such proportion as they are required by the organism ; but when we see the effect upon disease produced by very small quantities of certain selected portions of animals commonly used as food, such as thyroid gland, suprarenal gland, and bone marrow, the suspicion arises that these are but the more pronounced expressions of a widespread principle, and that such marked differences in therapeutic effect between certain organs may be associated with similar differences in nutritional value between the various portions and kinds of meat which we consume. We may surmise too that the modes of preparation may have a considerable influence, and that while good cooking may be, as it should be, a preparation for and an aid to digestion, certain processes in cooking may do much more harm to the nutritional value of our food than is explained by the mere change in its physical properties, the hardness, toughness, etc., which they produce. The destruction of the antiscorbutic properties of milk by condensing, overcooking, and sterilisation, is a case in point, and we commend to the British farmer the interesting question whether and how far the prolonged freezing of meat may interfere with its finer nutritional value. Healthy men, who have a great reserve of digestive power, can derive nutriment from almost any food, but for people of feebler frame a mixed diet must mean one in which variety of substances exists of whose nature and of whose differences *inter se* we as yet know nothing. The healthy man, by taking plenty, finds among it what he wants, but until we know much more than we do of the varied value of different foods and different modes of cooking, we must at least afford variety to our invalids, and protect them from a monotony in diet which may perchance be debarring them from the one thing needful for their nutrition.—*Brit. Med. Journ.*

Food for Infants.

WHEN predigestion of food is to be combined with sterilising, as is very often necessary in cases of illness, employ the following formula for a sterilized peptonized milk mixture : R Water, 8 ounces (250 grammes) ; one-half of a peptonizing tube or one peptonizing tablet. Dissolve. Add milk, 8 ounces (250 grammes). Peptonize. Then use : Peptonized milk, 2 ounces, (62 grammes) ; cream, 1½ to 2 ounces (45.5 to 62 grammes) ; milk-sugar, 1 measure ; water, enough to make 8 ounces (250 grammes). Sterilize by placing over brisk, but not too hot fire for forty-five minutes, removing hood of sterilizer and leaving lid slightly ajar. Temperature of milk does not go above 90°C. (194°F.), its digestibility thus not being affected. Safe for use for twenty-four hours.—*J. F. CHURCH GRIFFITH, Univ. Med. Nagar.*

"Kissing the Book."

THE Legislature of Pennsylvania has decreed that the oath on the Bible shall be dispensed with. The Governor of the State has indicated that he will approve of the amendments to that end. While it has always been at the option of the swearing citizen to "affirm" or to take the oath, the average person has not known of this alternative, and has done as directed when told to "kiss the book." This latter has the tradition and awe of the ages of court procedures behind it, but the multitude cannot fail to recognize the change as a modern reform. The silent work of the theory of the germ production of disease has undermined the time-honored process that has been winked at and tacitly continued by the police and other magistrates. These latter are not all of them "posted" on the properties of a kiss-moistened leather-covered book to hold and to propagate the bacilli of disease, and the presumption is that not a few of the Pennsylvania Dogberries will regard the amending act as a blow against the defenses of justice. To such no doubt the removal from their desks of the dirty greasy Bible will appear as a misfortune and an ill-advised innovation. To our bacteriologists and sanitarians, however, it will stand as a mile-post on the road of progress.—*Journ. of the A. M. A.*

Is a Private Hospital a "Nuisance" ?

THE Vice-Chancellor of Ireland has just given judgment in a case which will have interest for many outside Dublin. A lady leased a house in Fitzwilliam Square, and devoted it to the purposes of a private hospital for non-infectious cases. Lord Pembroke, as the owner, applied for an injunction on the ground that her act was a breach of the clause in the lease, which provided that no "offensive or noisy trade, business, or profession whatever," should be carried on in the premises, and the question was whether a hospital came within the meaning of the term "offensive." It was further contended that the adjoining property would be depreciated in value. The Vice-Chancellor held that the case had been proved, that there was a breach of the covenant in the lease, and he accordingly granted an injunction. Against this decision an appeal is to be taken.—*B. M. J.*

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THERAPEUTICS AND PHARMACOLOGY.

Sodium Bicarbonate in Diseases of the Stomach.

M. DUJARDIN-BEAUMETZ publishes a paper on this subject, in which he gives the results of his labors as well as those of a number of other experimenters. The following are the principal conclusions :—

- (1) Sodium bicarbonate excites gastric secretion.
- (2) When the dose is small, the increased acidity is slight and variable.
- (3) When it is a medium dose, the increase of hydrochloric acid is considerable.
- (4) When the dose is large, the period of excitation is prematurely arrested.
- (5) The excess of hydrochloric acid varies according to the doses, reaching its maximum with small doses in two hours, with medium doses in three hours, and with large doses in four hours.
- (6) The bicarbonate should always be given an hour before eating.
- (7) At the beginning of a meal the administration of the bicarbonate appears to suspend the secretion of pepsin. After the meal the exciting action becomes attenuated.

(8) In chemical dyspepsia, in cases of hypochlorhydria, the dose must be given an hour or half an hour before eating and in hyperchlorhydria during the meal or from three to four hours afterwards.

(9) In muscular dyspepsia, when there is a tendency to stasis or to dilatation of the stomach, the dose should be given during the meal or an hour afterwards.

(10) That the best alkaline waters to be employed in the treatment of diseases of the stomach are those containing sodium bicarbonate.—*Gaillard's Med. Journ.*

Action of Iodine on the Temperature of Phthisical Patients.

FROM clinical observations CERVELLO concludes that iodine introduced either by the cutaneous or subcutaneous route, is capable of lowering the febrile temperature to normal. He made use of DURANTE'S solution: pure iodine, 1 gram; iodide of potash, 10 grams; distilled water, 100 grams. One cubic centimeter of this is injected daily. CERVELLO attributes the action of the iodine to a double mechanism—as an antiferment and as a destroyer of the pathogenic agents by accelerating metamorphosis of their products. It is possible that this agent may prove a curative measure in tuberculosis.—*N. Y. Med. Rec.*

The Therapeutic action of Chloroform in Parturition.

IN all literature, DR. J. E. D. JONES says, there are reported not more than forty cases of death from chloroform during labor. He has used the anæsthetic, given every half hour for from twenty to forty hours, without any trouble following. He has seen a profound chloroform operation in obstetrics, lasting for three or four hours without grave effects. He objects, however, to the careless use of the anæsthetic. The alteration in the vasomotor system of a pregnant woman enables her to resist the toxic action of chloroform to this wonderful extent. Is the use of chloroform in labor for the relief of pain alone justifiable? He believes it is not only justifiable, but that it would be inhuman to withhold it. He believes that it is the anæsthetic of all others peculiarly adapted to parturition. At what stages of parturition is chloroform applicable? For pain in any stage in small quantities. To remove muscular rigidity of the cervix or perineum a larger quantity is required, until there follows complete muscular relaxation. Does chloroform tend to prevent uterine contractions? If given in sufficient quantity, it will do this. Does its use tend to promote hæmorrhage? He has never seen a greater tendency to hæmorrhage after than without its use. In 2,000 cases of labor which he has attended he has given chloroform in 1,500 without ill effects following.

For Elephantoid or Chronic Glandular Swellings.

| | | | | |
|-----------------|-----|-----|-----|-------|
| R. Soapstone | ... | ... | ... | ℥i. |
| Opium | ... | ... | ... | ℥i. |
| Aloes Soc. | ... | ... | ... | ℥i. |
| Spts. vin. Rec. | ... | ... | ... | q. s. |

Make a paste and apply to parts often.—

DR. E. W. CHAMBERS.

To dry up the Breasts during Nursing.

| | | | | |
|--------------|-----|-----|-----|-------|
| R. Soapstone | ... | ... | ... | q. s. |
| Lint Saponis | ... | ... | ... | ℥i. |

Mix into a paste and apply to breasts.—

DR. E. W. CHAMBERS.

Correspondence.

AN OUTBREAK OF CHOLERA IN THE DINAJPUR JAIL.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Would you please give a little space in the *Record* to the publication of the following note of an outbreak of cholera in the Dinajpur Jail:—

On the 5th May last, an undertrial prisoner was brought from a cholera-infected part of the district to the jail. On the 7th, two days after his admission, he was attacked with cholera. On his first complaining sick, there was no reason to suspect cholera, so he was sent to the hospital for treatment. He was not long there, however, before the symptoms developed and the disease ran a rapid course, terminating fatally in 10 hours. On the first suspicion of its being cholera, the ward was emptied of all its other occupants and every precaution taken to prevent the spread of the disease. No other cases occurred till the 13th, when two others were attacked at night and six more the next day, the 14th. On this day I ordered every prisoner in jail 10 minims of sulph. acid dil. and two grains of quinine morning and evening. This was continued for a considerable time. On the 15th two more cases occurred, after which the epidemic may be said to have ceased, as there was only one case on the 18th (an attendant on the cholera sick), one on the 23rd, (a weakly patient in the hospital) and one on the 25th, (a sweeper who had worked in the cholera ward all through.)

A sudden outbreak of 11 cases in three days seemed to threaten a serious epidemic, especially within the walls of a jail. This jail is a small enclosure and had a population of 180 souls within its walls, besides jail officers. There were no means at hand to at once remove a portion even of the prisoners from within, and it was impossible to prevent all contact between the attendants on the cholera sick with the other prisoners and jail officers, and yet the epidemic was cut short when it threatened its worst. Every endeavour was made by segregation, disinfection, &c., to prevent the spread of the disease, both after the occurrence of the first case on the 7th and subsequently, but to me these measures do not seem sufficient to account for the sudden cessation of this outbreak, among a lot of men so closely connected. Can it then be attributed to the protection afforded by the administration of the sulphuric acid and quinine? I am inclined to believe it can, and that it deserves a further trial. It has been proved that the cholera microbe ceases to exist in the presence of both these drugs, and if these drugs are present in the alimentary canal, the microbes can have no effect in producing the disease, but must themselves die. With reference to my inability to remove any of the prisoners from the jail enclosure, I must explain that provision is made at the Jail Depot at Calcutta for such contingencies, where on application a supply tent, equipage, &c., can be obtained. I wired for tents on the 14th, but they did not arrive till the 18th.

Yours &c., B. M. BLAKER,
Civil Surgeon, Dinajpur.

THE LATE DR. J. M. COATES.

To the Editor, "INDIAN MEDICAL RECORD."

SIR,—Every one who knew the late DR. COATES will appreciate the kindly terms in which the press has spoken of him. Apart from his high reputation as a medical gentleman, he was known to be a man of a most generous disposition and a very sympathising spirit. Wherever he went, he made friends, and he was liked as well by Europeans as by natives. There was always something so winning in him that one was irresistibly led to have the highest regard and esteem for him. Full of humour, the facetious remarks he was so fond of making by the bedside of his patients must have considerably helped in buoying them up with hope and dispelling their ills like a charm. Himself the father of a large family, he was very fond of children; and when he visited his patients, European or native, he always indulged himself in the pleasure of taking little children in his arms, and caressing them. He was held in such universal regard and esteem that, if a movement were set on foot to perpetuate his memory, subscriptions would, I am assured, come pouring in. Many European and Native gentlemen have already spoken to me on the subject, and told me that they would be glad to subscribe to any movement intended to perpetuate the memory of the man who has so suddenly passed away. I have no doubt that, if the Editors of the three medical journals that are published in Calcutta—DR. SIMPSON, DR. WALLACE, and DR. FERNANDEZ,—were to organize a movement with the co-operation of representative gentlemen of different nationalities, the success of such a movement would be assured, as there are many gentlemen who are ready to subscribe.

For my part I had the highest admiration and the greatest regard for DR. COATES, both in his professional and private capacity. His attendance on his patients was never of such brief duration as is proverbially known as "a doctor's visit." Possessing, as he did, a heart overflowing with kindness and sympathy, often and often did he refuse to take fees from patients who could ill afford to pay him. Always alive to the interests of his patients, he used often, on the same day, to pay them a second and a third visit of his own accord; and when he was offered a fee, he used to remark, with an expression beaming with sympathy: "Did you send for me? Please keep that money in your pocket, my friend. It will be of greater use to you."

Just one day before his death I had the honor and the pleasure of receiving a visit from him. It was one of those friendly visits which he used to pay my family whenever he returned to Calcutta. He seemed, as usual, to be full of humour and in excellent spirits; and he gave me a long account of his travels with his wife on the Continent. He was in robust health; and in taking leave of me, he jumped, to my surprise, a flight of two or three steps at the landing, and I remarked to him, "Doctor, you seem to have all the vigour and buoyancy of youth." He laughed heartily, and got into his conveyance. Imagine my surprise and grief to hear the next day of his sudden death.

Humorous as he always was, he was not insensible of a future existence. On a mournful occasion twelve years ago he sent me a letter of condolence which was a source of comfort and solace to me, and I have no doubt it will prove the same to the loved ones he has left behind, I take a few extracts from the letter, which is dated from the—

Medical College, "2nd April 1883."

"Dear Mr. Cranenburgh,—I know not how to show you my sympathy. Such losses and sufferings have to be felt to be known, and an outsider cannot enter within such a circle. Of two things I feel as sure as can be: (1) That however much one longs and tries for intercourse with the spirit that's gone, and however great our efforts to peer into the great eternity which is so near us, we cannot do it. It would not be good for us if it were permitted, for we would spend our time, and lose ourselves—perhaps make idols of such an intercourse. (2) We know that the same God Who gave Himself for us has us in His keeping as much before as after our demise, and we may fully and freely trust to His keeping the dearest object we possess, and even our own destiny. I greatly sympathize with your young family. Their loss is greatest—that of a mother's love and such an amiable and loving mother too.

Yours sincerely, J. M. COATES.

Verily, a great and a good man has passed away. The medical profession should be proud that they had such a man as one of their number, and I feel sure, that if the subscriptions were restricted to the medical profession alone, more than enough would be collected to perpetuate the memory of the late DR. COATES.

Yours, &c., D. E. CRANENBURGH, *Pleader.*

CALCUTTA, 15th July 1895.

DR. McCABE DALLAS ON HOSPITAL ASSISTANTS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Kindly permit me to communicate to DR. DALLAS of Kumbhir, through your journal, an answer to his question, what are the qualifications of Civil Hospital Assistants, published in your issue of the 16th March last.

DR. DALLAS is a medical officer of a tea garden in Cachar District, where young men of good qualifications do not like to go for an employment. Besides, the Bengalees entertain a very bad idea in respect to tea garden masters, and this has been very recently proved in a simple case played out by DR. DALLAS himself. In the issue of the 16th April 1895, DR. DALLAS asked for a good doctor babu, a man with experience, and having a knowledge of English as far as to be able to read and understand an English prescription. He wanted to pay Rs. 40 for the first six months and afterwards Rs. 50 per month.

I read his letter of the 16th March issue, and could understand thereby that during his "experience" he did not get a good doctor babu for his service. I accordingly advised a friend of mine, whose English qualification was up to the F. A. standard of the Calcutta University, and who cut a good figure in the final examination of the Campbell Medical School, Sealdah, and induced him to go there in the

hope that with his services DR. DALLAS might be well satisfied, and so wipe away the idea he has been entertaining so long about the qualifications of the Civil Hospital Assistant class. But to my great regret DR. DALLAS could not first understand whether the candidate was able to read and understand an English prescription, though his English qualifications were clearly stated in his application for the post. However, the applicant wrote him again in detail, and was waiting for a letter of appointment, when a telegram arrived, asking him to accept the post on Rs. 30 (!) while the advertisement was for Rs. 40, rising to Rs. 50.

Mr. Editor, do you think that such a man like DR. DALLAS could ever expect to get a good doctor babu for his services under such circumstances?

Now Sir, my answer is that so long as DR. DALLAS is not willing to offer a good pay for a good doctor babu he is not likely to know what the qualifications of Civil Hospital Assistants are.

Yours &c., RATIKANTA MOZUMDAR, C.M.S.,
Medical Practitioner.

CHAUSHONDI DISPENSARY, JAGATI P. O., 3th July 1895.

T. CUNNOOSWAMY PILLAI MEMORIAL FUND.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—At a preliminary meeting of the Hospital Assistant students, held on the 11th May 1895, to express their regret and sympathy in consequence of the great loss sustained in the sudden death of Mr. T. Cunnooswamy Pillai on the 4th May 1895, of apoplexy, a committee was formed with power to take necessary steps towards perpetuating the memory of the deceased.

The late MR. CUNNOOSWAMY PILLAI, a first-class Hospital Assistant was appointed Lecturer on Materia Medica to the Hospital Assistant Department, and also assistant Professor of Midwifery, Ophthalmology, and Dental Surgery of this College in the year 1866. Since then he used to send out from the College every year a batch of not less than 80 Hospital Assistants, well trained in matters social and professional—a fact which is well known among his scholars and friends.

The object of the Committee so formed is to raise a fund amongst his scholars, friends and sympathisers, so as to yield an annual income that may be sufficient to found a gold medal in his name for the Hospital Assistant students in the subject of which he was the lecturer.

A sum of over Rs. 250 is already promised by the Hospital Assistant students alone, and a large sum is expected from the professors, assistant professors, students of the College department of Madras and also from his friends, old students, and sympathisers of this Presidency.

A general meeting with one of the professors in the chair is being arranged to be held very shortly in the College, when a General Treasurer for the above fund will be elected and other matters in connection with it will be settled, the proceedings of which will be sent to the *Record* for publication.

All those medical men, especially Hospital Assistants, who were once MR. PILLAI's students, are therefore ear-

nestly requested to send their voluntary contributions towards the fund at an early date to the General Treasurer to be elected in the general meeting.

Yours, &c. V. S. ARMACHALAM PILLAI, *Secretary.*
Pillai Memorial Fund, Managing Committee.
MADRAS MEDICAL COLLEGE; 6th June 1895.

THE WOES OF HOSPITAL ASSISTANTS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—May I request the favor of your kindly taking into your kind consideration the following few lines and accord them your support as you think expedient in your esteemed journal?

Now-a-days steps are being taken to ameliorate the official status and title of the various higher grades of the medical service, both Indian and British; but poor Hospital Assistants are wholly ignored. They prove their work, though certified well deserving, meagre salaried and hardworking, and are recommended to be styled Sub-Assistant Surgeons by a Surgeon-General. Yet they are the same as they were originally. Lately the Apothecaries' designation was changed to that of Assistant Surgeons, and movements are being made to get the designation of Assistant Surgeons changed to that of Surgeons. Is not the designation of Hospital Assistants a misnomer for those holding executive charge? Years back the present Assistant Surgeons were called Sub-Assistant Surgeons, and the rank of Assistant Surgeon existed in the ranks of medical officers recruited from home; in other words, Netley Medical School. Men entering the Veterinary College have the same curriculum and scholastic education, yet they are considered graduates and are styled Veterinary Surgeons. It would be a great solace to the Hospital Assistants if their prospects and social position in the service is bettered.

Yours &c. NAROTAMDAS PARBHIDAS, H. A.,
In Medical charge, Kalol Dispensary.

KALOL, 6th March 1895.

AN INDIAN MEDICAL DEPARTMENT.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Have you heard anything recently which would justify us in looking hopefully forward in the beginning of the next century to having the word "Subordinate" removed from the designation of our department? At present we are the Indian "Subordinate Medical Department", and it is reasonable to expect that where there is a subordinate, there must also be a superior, or else the differentiation is without reason. Now I defy any one to prove that the "Indian Medical Service" has been called anything but I. M. S. for about 8 or 10 years, and it is a thing quite of the past to hear it called the Indian Medical Department. If therefore it is admitted that this is so, i.e. that there is no Indian Medical Department composed solely of commissioned officers, I think it could be allowed that we be designated the Indian Medical Department (I mean Military Assistant Surgeons and Hospital Assistants) without the fear or possibility of a mistake being made, or the I. M. D. being mistaken for the I. M. S.

That our position is subordinate no one can be foolish enough to deny, and we have sufficient to remind us daily that we are so, without having to put it after our names whenever we have occasion to sign officially.

Is it true that the Government contemplate giving an extra couple of years before being retired compulsorily to men who have attained the age limit of fifty-five? There will be so many "special cases" that some of us need never hope to merit a "Star" unless we partake liberally of "Parr's life pills."

Yours &c., JOB.

HOSPITAL ASSISTANTS' QUALIFICATIONS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—With reference to V. S. P. A.'s letter in your issue of 1st May, I beg to state that Dr. Dallas's remarks, it seems, are applicable to the Dacca Medical School only.

In the Bombay Presidency Hospital Assistants have been trained in English ever since the opening of Schools at Ahmedabad, Poona, Hyderabad (Sindh) in 1878. The subjects taught in the Ahmedabad Medical School are as follows:—

(1) Anatomy; (2) Physiology; (3) Chemistry; (4) Materia Medica; (5) Medicine; (6) Surgery; (7) Midwifery; (8) Medical Jurisprudence.

The candidates have to produce a certificate of having finished the Anglo-Vernacular Standard V at least, and the Entrance examination is held by teachers in Dictation, English (reading and translation) Arithmetic and Geography.

During their school course they are examined by teachers assisted by assessors in the above-mentioned subjects.

When at school I was classmate with a number of students who had passed the matriculation.

Yours &c., A BOMBAY HOSPITAL ASSISTANT.

RAJKOT, 10th May 1895.

REVIEW.

THE CARE OF THE BABY: A MANUAL FOR MOTHERS AND NURSES. Containing practical directions for the management of infancy and childhood in health and in disease. By J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, &c., (Publisher: W. B. SAUNDERS, 925 Walnut Street, Philadelphia). Price \$1.50.

It has seldom fallen to our lot to peruse a work written in the compact, *chaty* and yet interesting and really instructive style as is this one from the pen of DR. GRIFFITH, who grapples with a huge and difficult subject in a truly masterful manner and in the small space of eleven chapters, distributed over 340 pages of clearly printed matter leads us step by step from the embryonic to the pubescent period of that little tyrant, BABY, whose manifold ailments and tribulations have severely overtaxed many a powerful mind are now.

Strictly avoiding altruisms, disproving many popular fallacies that have hitherto obtained in the guise of truths and keeping thoroughly up-to-date, DR. GRIFFITH combines brevity of detail with clearness of description without falling into technicalities, and lays the plot of his *chef-d'œuvre* of medical literature, under seven principal stages, in which he considers:—(1) The hygiene of pregnancy, how to calculate the probable date of confinement and to do, before the baby comes, the hundred-and-one things necessary to be done for the begetting of sturdy offspring. (2). The characteristics and growth of the mind and body of healthy infants. (3). Basking, Feeding and matters relative to a properly-conducted nursery to the development of *mens sanas in corpore sano*. (4). A concise *resumé* of the symptoms and management of the commonest diseases of childhood. (5). Ready methods of relief in cases of drowning, poisoning and many other accidents. (6). Special directions for the nursery and preventive management of infectious diseases, such as diphtheria, small-pox, &c., and (7) a copious appendix embracing dietary, remedies for local use and internal administration, and many valuable hints for easy avail by those mothers who through various circumstances are unable to have a physician constantly within a moment's call.

We are one with DR. GRIFFITH when he claims that he has endeavoured to make his statements plain yet scientifically accurate to be of service not only to mothers and nurses, but also to medical students and to those practitioners whose opportunities for observing children have been limited; for both the charming novelty and the excellence of his work lie in the simplicity of the language he adopts, and he is to be heartily congratulated upon the production of a useful *multum in parvo* which calms the mother's fears and saves the doctor many an unnecessary trudge by making her understand when it is absolutely necessary to send for a physician, and what she should do before he arrives so as to simplify his work and save her little one's life.

• Government Medical Gazettes.

GOVERNMENT OF INDIA.

Undermentioned Civil Asst. Surgns. of Punjab Provincial Establishment are promoted to grade of Uncoovenanted Med. Offr.

First grade Asst. Surgn. Chetan Shah, *Akhan Bahadur*, Honorary Asst. Surgn. to Viceroy;

First grade Asst. Surgn. Lala Bhagwan Das (1).

Surgn.-Lieut.-Colonel A. Adams, M. D., I.M.S., (Madras), Residency Surgn. in Western States of Rajputana, is granted priv. leave for two months and twenty days, from 26th July, or the subsequent date from which he may avail himself of the same.

With the concurrence of Trustees, Indian Museum, services of Surgn.-Capt. A. W. Alcock, Superintdt. of Indian Museum, Calcutta, are placed temply. at disposal of Foreign Dept. from date on which he relinquished charge of his duties as Supdt.

The undermentioned offrs. have been permitted by Secretary of State for India to retire from service, from dates specified:—

Surgn.-Lieut.-Col. George Edward Elton Barronghs, I.M.S., (Bombay), 10th July.

Surgn.-Lieut.-Col. Henry Hyde, I.M.S., (Madras), is permitted to retire from service, from 26th May.

Senior Asst. Surgn. and Honorary Surgn.-Captain Henry Charles Hodgkins, Indian Subordinate Medical Establishment, is granted honorary rank of Surgn.-Maj. Dated 15th June.

In continuation of this Office Notification dated the 4th April, 1905, Brig.-Surgn.-Lieut. Col. T. H. Hendlay, O.I.E., Esq., Surgn. at Mysore, returned to duty on the forenoon of the 29th June, 1906, from the privilege leave granted him in this Office Notification dated the 20th Feby.

PUNJAB GOVERNMENT.

Surgn. Lieut.-Col. S. H. Browne, Principal of Lahore Med. Coll. performed the current duties of office of Insp. Genl. of Civil Hosp., Punjab, in addition to his own, from 25th March to 11th April.

On return from leave granted to him Asst. Surgn. A. Williams reported himself at office of Insp. Genl. of Civil Hosp., Punjab, at Lahore, on 15th June, and was apptd. to do genl. duty at Mayo Hosp., Lahore, from that date.

The following Notification of Surgn.-Genl. with the Govt. of India is republished for information:—

• The undermentioned Civil Asst. Surgns. of Punjab Provincial Estab. are promoted to grade of Uncovenanted Med. Officer:—1st grade Asst. Surgn. Chetan Shah, Khan Bahadur, Hony. Asst. Surgn. to Viceroy; 1st grade Asst. Surgn. Lala Bhagwan Das.

First class Hosp. Asst. Parmanand, whose services had been placed temply. at disposal of the Principal Med. Offr., Rawalpindi Dist., from Rawalpindi to Baganwala Colliery N.W. Railway, which he joined on 6th May, relieving 1st class Hosp. Asst. Maha Narain, whose services have been placed temply. at disposal of Prin. Med. Offr., Rawalpindi Dist.

Third class Hosp. Asst. Jawahir Singh, doing genl. duty at Mayo Hosp., Lahore, to Civil Hosp., Mooltan, for genl. duty from 12th June.

Third class Hosp. Asst. Moti Ram, doing genl. duty at Mayo Hosp., Lahore, to Jullundur for genl. duty from 29th May.

The services of 3rd class Hosp. Asst. Jawhir Mal being no longer required by Mily. Dept., he resumed charge of Midh Diap, Shahpur Dist., on 21st May 1895, relieving 2nd class Hosp. Asst. Amar Chand.

Second class Hosp. Asst. Amar Chand, from Midh to Miani Diap, Shahpur Dist., which he joined on 23rd May, relieving 1st class Hosp. Asst. Agia Ram.

First class Hosp. Asst. Agia Ram, from Miani to Sakesar Diap, Shahpur Dist., which he joined on 3rd June.

Asst. Surgn. Narain Singh, Senior House Surgn., Mayo Hosp., Lahore, has obtained six months' extraordinary leave without allowances from 3rd June.

Asst. Surgn. Harnam Das, Imperial List, doing genl. duty at Rawalpindi, to Mayo Hosp., Lahore, for genl. duty, from 3rd June.

Third class Hosp. Asst. Ganesh Datta, doing genl. duty at Dera Ismail Khan, having passed English qualification Exam. is entitled to higher rate of pay of his grade from 15th June.

Third class Hosp. Asst. Sukhraj Das, from Sarai Sidhn Diap, Mooltan Dist., to City Branch Diap, Sialkot, which he joined on 18th May.

The following transfers were made in Moolan Dist. in interests of public service:—

First class Hosp. Asst. Shankai Das, from Shujabad to City Branch Diap, which he joined on 1st June.

Third class Hosp. Asst. Rura Mal, from City Branch to Kahror Diap, which he joined on 7th June.

First class Hosp. Asst. Fattah Singh, from Kahror to Shujabad Diap, which he joined on 10th June.

On return from furlough granted to him Asst. Surgn. Bishen Das is apptd. to do genl. duty at Rawalpindi, 12th June.

Asst. Surgn. Fateh Chand made over charge of duties of Supdt. of Rohak Jail to Senior Asst. Surgn. J. Barker on 3rd June.

Asst. Surgn. W. Marchant made over charge of duties of Supdt. of Shahpur Jail to Asst. Surgn. Mehar Chaud II on 7th June.

The leave on med. certificate granted to 1st class Hosp. Asst. Ghulam Kadir, Shikhar Diap, Jhang Dist., is converted to furlough on private affairs.

With reference to Article 264 (3), Civil Service Regulations, the following newly passed Hosp. Assts. were granted one month's leave on full pay from 27th May.

Harbhagwan Das, Ganesh Datta, Ganesh Das, Thandee Ram, Mool Singh, Beli Ram, Abdul Rabman Khan, Hari Chand.

Third class Hosp. Asst. Isa Charr, doing genl. duty at Mayo Hosp., Lahore, to Gujranwala for genl. duty from 11th June.

Third class Hosp. Asst. Ganesh Datta reported himself to Civil Surgn., Dera Ismail Khan, for general duty on 11th June.

Third class Hosp. Asst. Thandee Ram reported himself to Civil Surgn., Mooltan, on 24th June.

First class Hosp. Asst. Haasan Din, attached to 5th Division Chenab Canal, Gujranwala Dist., has obtained one month's priv. leave from 12th June.

On return from priv. leave, 2nd class Hosp. Asst. Talai Ram resumed charge of his duties on Railway, Nowshera, on 13th June relieving 2nd class Hosp. Asst. Sheikh Hafiz Ali.

On return from priv. leave Asst. Surgn. Hardial Singh was apptd. to do genl. duty at Mayo Hosp., Lahore, from 18th June.

The following candidate has passed the second exam. for Bachelor in Medicine and Surgery from Med. Coll., Lahore:—Muhammad Azeem.

The following candidates have passed the first exam. for Licentiate in Med. and Surgery from Med. Coll., Lahore:—Chaman Lal, Hamid Ali, Kidar Nath, Kondal, Chiranji Lal, Ellen Masih, Uttam Chand, Gopal Das, Mona M. Sircar, Girish Chandra Chatterjee, Jagindra Prasad Sanyal, Mirza Yaqub Beg, Ganapat Rai, Shankar Das, Khanna, Charu Chandra Ghosh, Tara Chand Batra, Grace E. Marston.

MADRAS GOVERNMENT.

Surgn.-Capt. W. E. A. Armstrong, I. M. S., Madras, Resy. Surgn. and *ex-officio* Asst. to Roadt. in Nepal, is granted priv. leave for three months, from 24th June.

BOMBAY GOVERNMENT.

The following transfers are sanctioned:—First class Hosp. Asst. Ramji Bapuji, from Vengurla Diap, 26th May, to Civil Hosp., Ratnagiri, 30th May.

Third class Hosp. Asst. Yeshwant Gainooji, from Point Diap, temply. 18th May, to genl. duty, Nasik, 24th May.

Second class Hosp. Asst. Mohunlal Nanakram, from leave 8th May to Point Diap, 18th May, *vice* 3rd class Hosp. Asst. Gajanan Krishna, transferred.

First class Hosp. Asst. Luxumon Anant, from Civil Hosp., Kaira, 12th May, to Central Prison, Ahmedabad, 20th May, *vice* 1st class Hosp. Asst. Vithal Baiwant, granted leave and transferred.

Second class Hosp. Asst. Amrut Govind, from Manea Diap, Mahi Kantha, 31st May, to genl. duty, Surat, 5th June.

Third class Hosp. Asst. V. Appadorai Nalfer, from Sludgi Diap, 24th May, to genl. duty, Sholapur, 30th May.

Third class Hosp. Asst. Baberbhai Chhotabhai, from genl. duty, Rajkot, 18th May, to Jetalpur Diap, Kathiawar, 14th May, *vice* 3rd class Hosp. Asst. Hargovind Dhuneshwar, granted leave.

Third class Hosp. Asst. Chimanlal Mahasukhram, from genl. duty, Bombay, 8th May, to Fatelani Diap, 17th May, *vice* 3rd class Hosp. Asst. Pirozsha Edulji, transferred.

Third class Hosp. Asst. Pirozsha Edulji, from Satlana Diap, 17th May, to Lord Harris Travelling Diap, Dacori Taluka, 20th May.

Third class Hosp. Asst. Chubermal Santdas, from Karachi Dist. Prison Hosp., 11th May, to Jerruck Diap, 17th May.

Third class Hosp. Asst. Chellaram Tillamal, from Jerruck Diap, 17th May, to Shikarpur Dist. Prison, 26th May.

Third class Hosp. Asst. Teckchand Lekhraji, from genl. duty, Hyderabad, 22nd May, to Kbiara Diap, 16th May.

Third class Hosp. Asst. Teckchand Rachamal, from Kbiara Diap, 16th May, to Sanghar Diap, 16th May.

Third class Hosp. Asst. Chaudh Chotabhai, from genl. duty, Bombay, 14th May, arrived from Bombay on 19th May and joined Kotri-Kohri Ry., Hyderabad, 26th May.

Third class Hosp. Asst. Waddal Keshavial, from genl. duty, Bombay, 14th May, arrived from Bombay on 19th May, and joined Kotri-Rohri Ry., Hyderabad, 25th May.

Third class Hosp. Asst. Shivajee Pandu Jadov, from genl. duty, Godhra, 10th May, arrived from Bombay on 17th May, and joined Kotri-Rohri Ry., Hyderabad, 25th May.

Third class Hosp. Asst. Bhowanilal Harisbanker, from genl. duty, Surat, 10th May, arrived from Bombay on 19th May, and joined Kotri-Rohri Ry., Hyderabad, 25th May.

The undermentioned are allowed leave :—

First class Hosp. Asst. Vithal Balwant, priv. leave for two months and fifteen days from 20th May.

Third class Hosp. Asst. Hargovind Dhuneshwar, Jetalisar Dispy., priv. leave for one month from 14th May.

The priv. leave therein granted to 1st class Hosp. Asst. Hari Krishna Rayaker is extended for a period of one month and twenty days.

The priv. leave therein granted to 3rd class Hosp. Asst. Teekchand Lekhray is extended for a further period of ten days.

The undermentioned Asst. Surgns., Indian Subordinate Med. Dept., 2nd grade, passed the exam. qualifying them for promotion to 1st grade :—

Alfred Henry Ekus, Celestine Raymond, Peter Hyacinth Rodrigues.

The undermentioned Hosp. Assts. passed the exam. qualifying them for promotion :—Military Branch, 2nd grade : Papanya Hadick, Ganesham Kaslay, Shalk Mahomed Axis, Rajay Khan, Moortooza Khan, Gopinath Yeshwant, 3rd grade : Viragoo Dhurmalingam, Gershome Shallum, Joseph Daniel, Civil Dept. 2nd class : Narayan Bapuji, Byramji Jivaji.

The undermentioned 1st grade Hosp. Asst. is promoted to Senr. Hosp. Asst. to fill an existing vacancy :—Mily. Branch : Ramji Dhondji Khanwelkar, from 11th April, *vice* Senr. Asst. Rao Sahab Gugnaji Ramji, pensioned.

The undermentioned 2nd grade Hosp. Assts. to be 1st grade Hosp. Assts. from 12th June 1895 :—Ramji Kundoji Kudum, Laxminarayan Jethabhoj, Hamidulah Azimtoolah, Ganesham Kuslay, Shivram Naidoo, Shaik Ali Shabash, Ballaraji Lingoo, Ranchander Vasudeva, Guvesh Sudashiva.

The undermentioned 2nd class Hosp. Assts. to be 1st class Hosp. Assts. :—Narayan Bapuji, from 27th April ; Chaturji Narayan, from 20th June.

Asst. Surgn. S. F. Ghandhi is permitted to draw increased rate of charge allowance at Rs. 35 per month.

The undermentioned is admitted into Med. Dept. as Civil Med. Pupil :—Jamietram Pransukhram, Civil Hosp., Karai, 13th May.

CENTRAL PROVINCES GOVERNMENT.

The following transfers among Officiating Civil Surgns. are ordered :—

Mr. T. W. Quinn, from Balaghat to Damoh.

Asst. Surgn. Lakshmi Narayan Chauthri, from Damoh to Balaghat.

Mr. T. W. Quinn, Officiating Civil Surgn., made over charge of his duties at Balaghat on 19th idem.

On being relieved by Civil Hosp. Asst. Ramlogan Singh on return from three months' priv. leave, 1st class Civil Hosp. Asst. Syed Mehdil Hussain, temply. attached to Sehara Branch Dispy., Jabulpore Dist., is directed to do duty under orders of Civil Surgn., Jabulpore.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Maj. J. Moran, Civil Surgn. Gorakhpur, furlough out of India for six months, from 30th April.

Surgn.-Maj. G. M. Nixon, Civil Surgn., Jhansi, furlough out of India for six months, 1st May.

Mily. Asst. Surgn. W. H. Butcher, Asst. to Civil Surgn. Allahabad, priv. leave for one month and twelve days, from 20th June.

The undermentioned med. pupils of Agra Med. School, having passed their final exam. on 1st May, are apptd. 3rd grade Hosp. Assts. in N.-W. P. and Oudh from date of

passing :—Bhagwan Dass, Zahid Hussain, Mehdil, Hasan Khan, Hamid Raza Khan, Muhammad Hasan, Dwarka Farahad, Bharat Lal, Alay Ahmad, Aziz-ud-din, Banoobhar, Muhammad Salim, Shad-ul-Hasan, Vigar Ali Ram Autar, Bahadur Singh, Abdul Jabbar, Ahmad Hasan, Ram Kaar, Ram Lal Zafaryab Khan, Baj-jad Hussain, Paul David, Ram Sarup, Kishan Sarup, Rogers, Alfred, Faraghat Ali Shah, Bisheshar Pershad Singh, Lakshmi Narain Singh.

Third grade Civil Hosp. Asst. Ganga Sahai having passed middle class Anglo-Vernacular Exam. in Jan'y. last, is entitled to receive English qualification allowance of his grade, 1st Feb.

The undermentioned Civil Hosp. Assts. of Provincial Staff of N.-W. P. and Oudh have passed their septennial exam. and are promoted to next higher grade from dates noted against their names :—Nasir-ud-din Khan, 1st grade, 15th April ; Muhammad Moyn-ud-din, 1st grade, 15th April ; Kalka Farahad, 15th April ; Sheo Ratan, 1st grade, 16th March ; Sita Ram, 2nd grade, 15th April ; Abdul Ghafur, 2nd grade, 15th April.

The undermentioned Civil Hosp. Assts. of Provincial Staff of N.-W. P. and Oudh have passed the exam. in English, and are allowed to draw English qualification allowance of their grade from dates specified against their names :—Kunj Behari, from 15th April ; Shahid Ali Khan, from 15th April.

BURMA GOVERNMENT.

First grade Hosp. Asst. V. Chinnaasawmy Pillay assumed, as an additional duty, charge of Police Hosp., Lashio, Northern Shan States, 9th May, *vice* 2nd grade Hosp. Asst. Gulam Mustafa.

First grade Hosp. Asst. M. Coopooasawmy Pillay, on re-transfer to Mily. Dept. relinquished charge of Civil Hosp., Myingyan, on 10th June.

Second grade Hosp. Asst. Gulam Mustafa relinquished charge of Police Hosp., Lashio, Northern Shan States, on 9th May and assumed charge of the Outpost Hosp., Namkhan, Northern Shan States, on 19th May.

Second grade Hosp. Asst. Prem Dass relinquished charge of Police Hosp., Nampuang, Bhamo Dist., on 8th June.

Second grade Hosp. Asst. Anant Singh, on availing himself of priv. leave for three months, relinquished charge of Police Hosp., Minbu, on 9th June.

Third grade Hosp. Asst. Abdoal Wahid relinquished charge of Outpost Hosp., Pinka, Mogaung sub-division, on 22nd May and assumed charge of Police Hosp., Bhamo, on 3rd June.

On return from priv. leave, 3rd grade Hosp. Asst. Maung Lu Gale assumed charge of Civil Hosp., Myingyan, on 10th June.

On his return from leave, Surgn.-Capt. C. N. Bensley is apptd. as a tempy. measure to hold executive and med. charge of Rangoon Central Jail, *vice* Surgn.-Capt. A. R. P. Russell, proceeding on furlough.

The services of Asst. Surgn. J. T. Weston are placed at disposal of Surgn.-Genl. with Govt of India.

Second grade Hosp. Asst. C. Sathasiva Mudoli, on return from priv. leave, assumed charge of Police Hosp., Minbu, on 9th June.

Second grade Hosp. Asst. Abraham Samuel, on availing himself of two months' priv. leave, relinquished charge of his duties at Police Hosp., Khatat, Upper Chindwin, 10th June.

Second grade Hosp. Asst. C. A. Chinnaasawmy Pillay on return from leave on (m.c.) assumed charge of Genl. Hosp., Rangoon, on 17th June.

Third grade Hosp. Asst. Abdur Bhaman relinquished charge of Outpost Hosp., Kalata, Upper Chindwin, on 3rd June and assumed charge of Police Hosp., Khatat, Upper Chindwin, on 8th June.

ASSAM GOVERNMENT.

Sick leave for ten days is granted to 3rd grade Hosp. Asst. Abdul Jalal, a superny. in the Nowgong Dist., from 3rd to 11th June.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Rs. 1 for subscribers and Rs. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

KENNEDY.—On the 18th June, at 178, Cromwell-road, South Kensington, the wife of Brig. Surgn. Lieut.-Col. Keegan, F.R.C.S., of a daughter.

DIMMOCK.—On the 6th July, at Mount Pleasant, Malabar Hill, the wife of Surgn.-Maj. H. Peers Dimmock, I. M. S., of a daughter.

PRICE.—On the 9th instant, at Mussoorie, the wife of Surgn. Lieut.-Col. Gordon Price, of a daughter.

DEATH.

COATES.—On the 10th July, in Calcutta, John Martin Coates, M.D., Brig. Surgn. Indian Medical Service. (Retired). Age 63 years.

NOTICES TO CORRESPONDENTS.

D. N. C. P. (Lucknow).—If you pass the "Entrance" of any Indian University, you can claim all your collegiate course certificates, and you will get them on payment (see *Medical Register and Directory of the Indian Empire*). All such certificates will be recognised by British corporations, and you may present yourself for your examinations on landing. Having secured your diplomas, you may compete at the next I. M. S. examination. For further information see *Directory* to be had of Manager, *I. M. R. Office*.

M. R. (Triplicane).—Your excellent paper will appear in an early number.

A Madras writes:—"Touching your comment on the 'Strychnine cure for snake-bite' in the *Record* of the 16th June, you will find an interesting article in the *Madras Mail* proving that it was practised in Malabar long before it was thought of by European doctors, vide Madras Surgeon General's Circular No. 14 of 7th June 1893, which warns against experiments on lower animals, and Circulars No. 60, 7th January 1891 and No. 1210, 23rd February 1893 contain the previous official directions. Yet experiments were undertaken at a vast expense of public time and money."

A Surgeon Major writes:—"I find in the Madras Surgeon General's Circular No. 14, 14th May 1893, that 12 copies of the *Indian Medical Gazette*, at an annual cost of Rs. 180, are purchased by the Madras Government for the benefit of its civil surgeons. Surely this is an unjustifiable waste of public money, and a cruel effort to crush the enterprise of such journals as the *Record* and the *Reporter*."

V. S. (Sinoga).—Saunders' Essentials and the books reviewed in the *Record* will suit you. Look up the Manager's advertisement in this issue.

P. V. R. R. (Kaikalar).—We have not the address of the Kuviraj you write about.

L. K. V. (Hati Mardan).—Have a little more patience. We think members will be very pleased with their certificates when they get them.

T. C. B. (Fort Govindpur).—We have your strolcher drawings. The cost of lithographing will be Rs. 40.

H. K. S. (Raiganj).—Your paper appears in this number.

J. J. S. P. (Calicut).—Many thanks, your paper will receive early attention.

M. B. K. (Bilgram).—Yes, wait a little.

M. J. (Vellore).—Write to Dr. Palpu of the Mysore Vaccine Depot, and he will gladly give you the information you need about vaccine.

B. H. N. (Ahmedabad).—Thanks, later on.

L. J. (Lucknow).—Your excellent paper will shortly appear. Many thanks.

K. A. (Dacca).—To get the M. D. of Brussels University you must possess fully qualifying British diplomas.

V. S. H. P. (Madras).—We think Dr. Dallas has been sufficiently answered. The doctor evidently refers

to some very poor material found in his district; while on a class, Hospital Assistants are daily proving themselves a capable and highly useful body of practitioners.

J. K. D. (Sultanpur).—Make an application to Government. There is no precedent on which your questions could be satisfactorily answered.

M. D. T. (Dhoraji).—See this issue.

M. J. P. (Jammalamadagh).—Your station has a frightfully long and unpronounceable name. If you possess an Indian degree you can claim exemption from all the junior examinations of the British Corporations and obtain a diploma by passing the senior exam.

C. F. P. (Melbourne).—In India the old "warrant" of Apothecaries was a diploma entitling its holder to practice medicine, as may be seen from the Bengal Army Regulations. This "warrant," however, was not a registrable diploma outside India. We think the new diplomas of our Medical Colleges would be acceptable as licences in the colonies and would be registrable. You should apply to the Government of India for an authoritative expression of opinion on the value of the old "warrant" as a diploma.

Several other contributors and correspondents will find attention in our next issue.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—In-lia Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medical-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjina Tibabat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Sculptor—The Practitioner—Medical Missions.

Gazettes of the Governments of India, N.-W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers.—Indian Daily News—Bangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planters' Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine.

Books.—*The Care of the Boy: A Manual for Mothers and Nurses*. By J. P. Crozer Griffith, M.D., (Publisher: W. B. Saunders, 925, Walnut Street; Philadelphia). Price \$ 1.50.

Literary Contributions and Letters from: Arthur Neve, F.R.C.S., Kashmir; Surgn.-Capt. Patrick Behr, M.D., F.R.C.S., F.R.C.S.E., D.R.H., Hyderabad; A. Mitra, L.R.C.P., L.R.C.S., Kashmir; Hara Kall Sen, V.L.M.S., Dinsajpur; T. M. Shah, L.M.S., Junagadh; Harry Gidney, D.M.C.C., Mussoorie; Edward Balm, Hyderabad; E. Condos, L.M.S., Bombay; Kalapathy C. Subramaniam Pillai, C.M.S., Kanjur; B. M. Blaker, Dinsajpur; D. E. Craunburg, Pleader, Calcutta; Ratikanta Mozoomdar, Jagati, P. O.; Arzachalam Pillai, Madras; Narotandas Parbhudga, Kolai; and others.

ORIGINAL ARTICLES.

CHOLERA AND ITS SPECIFIC FEVER.

By SURGEON-MAJOR PATRICK HEHIN, M.D., F.R.S.E.,
F.R.C.S.E., D.P.H., (Cantab.)

Lecturer on Medicine and Pathology, Hyderabad
Medical School.

THE specific fever theory now has been advocated several times by eminent authors during the last fifty years, but the evidence adduced hitherto has scarcely been sufficient to support the theory. OLDFHAM in 1872 aroused considerable attention by his chill theory of cholera; as did also Surgeon-Major ALEXANDER SMITH in the same year, with his malarial theory of cholera.

The theory that cholera is a pernicious or other form of malarial fever has been advocated for many years. This view was at one time employed as an argument against its being either contagious like small-pox or propagated from person to person as a specific fever.

It can scarcely be conceived that it could be in the waters examined, and yet one fails to discover it so repeatedly. But more than this, we have found it in the serous diarrhoea of certain cases of malarious fever, in simple diarrhoea and other cases. We have seen it frequently in cholera evacuations, but almost invariably in association with one or some other forms of bacilli; far more active than itself, and we have repeatedly expressed this opinion.

Those who have given any attention to the subject of the hæmatozoon which I discovered in the blood of cholera cases in June 1891, must have been struck with the remarkable similarity between it and the plasmodium malarie as met with in this country; and probably no one but experts would, at first sight, clearly define the differentiating characteristics between the two. Marked differences, however, do exist, especially as regards the rapidity with which the cholera parasite carries out its life-cycle; its considerably greater activity, and consequently its greater destructive power on the blood; the existence of well-defined flagellated structures which carry out an intra-cystic phase of development in the blood before being set free; probably the large quantity of toxins generated, &c., &c.

It is not my intention to burden the reader with a description of the hæmatozoon, but for the purposes of this note, it is necessary to state that the parasite is a protozoon of the new class created by LEUCKART, viz., *sporozoa*; that it is polymorphic, and that from its development in the embryonic spore-stage to that of maturation into free flagellated plasmodia on the others, it exhibits several forms, which are highly interesting.

As in the case of ague, the development and setting free of intra-cystic spores is an important phase in the life-cycle of the hæmatozoon of cholera, and I believe that it is during the process of sporulation that the poison which gives rise to the symptoms of cholera is developed. I further believe it to be possible to abstract a tox-albumen from the serum of cholera cases which would create the symptoms characteristic of that disease. This aspect of the question is the subject of another paper which will appear shortly.

The process of evolution in the life-history of this hæmatozoon appears to me to be both distinct and unequivocal: (1) formation of cystic structures; (2) spore formation; (3) liberation of spores; (4) development of intra-cystic flagellus; (5) free flagella, &c. Of these (2) and (3) are always visible; (5) is seen in about 80 per cent; (4) in about 15, and (5) in about 6 per cent. of cases. One single observation in which (5) is met with, will remove all doubt, and I feel sure that those who have averted on my description of these flagella, will be the first to admit the significance of this discovery when they have the opportunity of making this observation.

The effect of the poison should, according to this view, be limited only by the number of organisms, and the extent of sporulation, which latter determines the quantity of the poison generated at any one time. But on the other hand, after the elimination of the poison, there is a rapid return to health.

It may be thought that one has rushed to conclusions on inadequate data, but the following considerations demonstrate that the position I have taken up may be based on a sound physiological and pathological basis.

It is a well known physiological fact that the vessels of the skin are capable of adapting themselves to enormous changes in calibre. It is further known that this is due entirely to their comparatively large amount of elastic and muscular tissue and its well developed vaso-motor nerves. In this way we are not only able to explain many of the phenomena noticed in health, but many of these in disease.

But other factors are also at work in producing anæmia, viz., qualitative and quantitative changes in the circulating blood. Now when an active constriction occurs in the cutaneous vessels, a peculiar sensation is experienced, and locally the skin is felt to be less succulent and cooler. If the normal tonus varies, the temperature may not alter, and the volume of blood remains *status quo*. This gives a broad basis upon which to regulate the circulation of the skin. Changes in quantity arise from deficiency of red or increase of white corpuscles, or a minimum of both these conditions. The former factor is well seen in true chlorosis, athrepsia and mal-assimilation, both of which may arise from a dozen different maladies; in lasting febrile diseases, in the various states producing pseudo-leucocythæmia; but in true leucocythæmia, there is also an exaggeration of the number of white blood cells, relative and absolute, in certain forms of anæmia, and in the cachexia arising from such conditions as cancer, tuberculosis, &c., whilst there is at the same time a deficiency of hæmoglobin, there is likewise a diminution in the total quantity of the blood. In these states therefore we have a complexity of phenomena as regards the circulation of the skin, the main factors being an altered condition of the calibre of the vessel to accommodate itself to the decreased volume of blood circulating, a change of color in the blood itself due to a serious modification in the quality of the blood. The most manifest form of this variety of anæmia is seen in wounds which have bled freely in cases of post-partum hæmorrhage, in the hæmorrhages from internal piles, ulceration of the bowels, and that

from persons affected with the anchylostoma duodenale^o &c., &c.

In cholera in fair-skinned people, we have the characteristic bluish-gray or "ashy" hue of the skin, which is also brought about by two factors: (1) a cyanosis of the blood itself which becomes progressively greater as the rapidity of the blood-flow lessens, and (2) universal constriction of the cutaneous vessels.

It is usually stated that the fall of external temperature in cholera and the rigid contraction of the vessels of the skin is brought about by a serious alteration in the quantity flowing through it at any one time—therefore we have a condition comparable, if not identical, with cases of isolated anemia in which no modification of quality arises. This may involve all the skin or only a part of it. If the surface of the whole body is anemic, the entire circulation or the general nervous system must be affected.

The most marked and important example of cutaneous constriction is seen in the rigors of the incipient stage of the acute specific fevers. Here we know or believe, that there is a *materia morbi* circulating in the blood supplying the vaso-motor nerve centres, which stimulates them, and gives rise to rigid constriction of the peripheral vessels. If the rigors are severe, the vessels of the superficial muscles are also affected, and even those of the internal organs become abnormally full. Hence the temperature of the surface falls, and that of the deeper parts of the body rises.

Warmth, covering of the body, &c., which prevents loss of heat, may particularly overcome the tonic constriction by paralysing the vessels. We daily see in India that with a terrible fit of shivering the temperature in the covered axilla is rising and continues to do so, till it reaches its acme. On the other hand, cold accelerates the rigor, shewing that the tone of the vessels, in the interval between the rigors, is really raised, and only kept in check by the greater warmth of the blood and the active surface loss.

Certain poisons as ergot and strychnine contract the blood vessels, tonically, although it is not the arterial spasm of rigor, and the pallor after acute poisoning with alcohol is similarly produced by the products of decomposition. It is not a slight irritation which reflexly or directly produces a general cutaneous anemia, but general pathological circumstances, which modify profoundly the whole constriction. This we understand at once when we remember that the natural constriction is very great, and that the vasomotor nerves must be greatly stimulated to cause visible pallor and sensible cold.

Cold is the most frequent cause of additional tone in the cutaneous vessels, but to cause this effect, cold must be considerable, such as is caused by ice bathing or sponging.

If the difference in temperature between the external air and the body be but small, the temporary arterial spasm of health is followed by a relaxation of the vessels, and the heat may continue to be lost. This is the case when the

^oIn people under 50, especially those with a fair supply of subcutaneous fat, anemia usually causes the skin to assume a peculiar yellowish semi-transparent, waxy appearance. This arises from the operation of two factors, (1) the regulation of the calibre of the vessels by the action of the vaso-motor nerves—an adaptive process created by a conservative natural action—and (2) absorption of the tissue fluids by the veins and lymphatics.

body is submitted to a cold stream of air or immersed in a moderately cold bath and subsequently removed.

In the matter now before us, we are concerned primarily with the vasomotor factor of the blood vessels of the surface, and the facts so far elucidated, point to a vigorous contraction of the arterials of the cutaneous superficial muscles, sometimes the deeper muscles, and even the internal organs.

In almost every case of cholera, the blood in the deeper parts is considerably above the normal temperature. Those who have seen much cholera know that some cases begin with a high surface temperature, which gradually goes down. But in most cases, if we were to force the blood into the surface as may be done by the transfusion of differentiated blood or saline solution, we should find that the temperature would rise more or less suddenly. As stated, the operation of transfusion shews this at once.

On five separate occasions we have had cases which indicate that the internal temperature is considerably above that in the superficial parts—a fact which points to the effect of the poison on the vasomotor system.

It would seem indeed that the first effect of the poison is to bring about a constriction of the superficial arterioles, so that there is a regurgitation inwards to the splanchnic area. Indeed, we have here the effect on a large scale pathologically, which follows the stimulation of the peripheral end of the divided superior cervical ganglion of the symptom on one side in the rabbit's ear and side of face.

In cholera there is a general paralytic state of the vessels of the splanchnic area, which produces active congestion of the mucous membrane of the alimentary canal, shewn by the effusion into the bowel, sudden diarrhoea and vomiting. In all probability this effect is the same in kind, but vastly more intense and prolonged in its effect than that which in malarial fever gives rise to the rigors of ague.

Further, as in ague, it may possibly be due to the poisonous substance produced during the process of sporulation. As in ague, the effect is limited only by the number of organisms present at one time, but in cholera the process is more or less constant, and not intermittent. We should remember, however, that Sir JOHN SIMON states the condition of the circulatory system in collapse, and Dr. JOHNSON'S doctrine of the dependence of that state on spasmodic closure of the minute pulmonary arteries are doctrines which do not necessarily involve an acceptance of the eliminative treatment of cholera, nor presuppose any belief that cholera begins as a blood-disease. It is important that the different questions should not be jumbled together as one; particularly important now, since the notion of a primary blood poison in cholera seems to be a question still at issue." Again SIMON writes: "In the present state of our knowledge I do not find it proven nor do I see any theoretical convenience in taking for granted that cholera begins as an active blood change capable of producing primary collapse. The facts, so far as I know them, can all be reconciled with the belief that cholera begins as a bowel disease, producible by direct contagion without even a passive intervention of the blood

and that all anaphoretic phenomena of the disease are supererogatory phenomena. That, so far as they are facts of cardiac paralysis and arterial contraction, they may be attributed to nervous sympathy between the bowels and circulatory system, without reference to the greater or less humoral effect of the coincident flux from the bowels, is at present a tenable view. At the same time, I hesitate to accept as proven that cholera collapse is independent of humoral sympathy. In questioning the fact of a primary blood poisoning in cholera, I of course, do not intend to deny that the blood during cholera is poisoned. From our earliest knowledge of the disease, it has been on record that, when pregnant women have cholera, the intra-uterine offspring almost invariably dies; and more recently, in proportion as the anatomy of the disease has got to be better studied, cases have accumulated, giving detailed evidence in support of an opinion which had from the first been entertained, that the infant in such cases dies of true choleraic infection. Waiving particular reference to earlier cases of this sort for which see, for instance, *Phabus*, 1833, *op. cit.* 51,^o and *Burl*, 1866.

Such is the nature of cholera according to the observations of SIMON, PARKES, WILLIAM ROBERTSON, SCHMIDT, NEIMEYER, JOHNSON, and SIR THOMAS WATSON, and thus "an early theory of the nature of this disease has received the support of the best physicians and chemists of the day—namely that the blood, if not the primary seat of the disease, becomes eventually contaminated by the action of a specific poison."

At the International Medical Conference on Cholera, which met during Easter of 1867, at Weimar and which Mr. SIMON attended, Professor HALLIER of Jena, and Dr. BARY of Halle (two of the leading mycologists of Germany) were associated with Drs. THOME and KLOB in making, in common with them, a statement and an appreciation of the facts which had been observed and which are in substance that—"Both observers find in cholera evacuations, and in the intestinal mucus of the dead body, definite organic structures, consisting of excessively fine granules, clustered together more or less densely, in the interspaces of a jelly which surrounds them. The granules divide and sub-divide themselves, and form beaded threads, which interlace in immense numbers into small masses in the mucus. The further development of these organisms has been determined by THOME and HALLIER. By sowing or cultivating them these observers have got, after some time, larger round cell-like bodies, which rapidly multiplied, and also abundant filamentous fungi (cylindro tenium), on which grew cylindrical spores capable of developing again into filamentous forms (Ninth Health Report of the City of London by Mr. SIMON, p. 31). In 1849 the question of fungi in cholera stools was repeatedly discussed on the repeated observations of several independent observers; but the objects then described do not seem capable of precise identification, or as being exactly the same as those now described. It would appear that BOEHM in 1838 described "the whole extent of the intestine as teeming with

a vegetation of micro-fungi; that innumerable round and oval, or more joined end to end, as links of a chain, and these chainlets sometimes branching; that such forms are held together, in mucous floccules, and come best to light when liquor potasse is used, that within the small intestine they are often so numerous that not the smallest specimen will fail to shew numbers of roundish fungi forms amid the debris of epithelium."

"(1). That no cysts exist in choleraic discharges which are not found under other conditions. (2). That cysts or "sporangia" of fungi are but very rarely found under any circumstances in alvine discharges. (3). That no special fungus has been developed in cholera stools, the fungus described by HALLIER being certainly not confined to such stools. (4). That the still and active conditions of the observed animalcules are not peculiar to this disease but may be developed in nitrogenous material even outside the body. (5). That the flakes and corpuscles in rice-water stools do not consist of epithelium, nor of its debris, but that their formation appears to depend upon the effusion of blood-plasma; and that the peculiar bodies of PARKES found therewith correspond very closely in their microscopic and chemical characters, as well as in their manifestations of vitality, to the corpuscles which are known to form in such fluid these are generally to a greater or less degree, associated with blood cells even when the presence of such is not suspected, especially as the disease tends towards a fatal termination, when the latter have been frequently seen to replace the former altogether; and (6) that no sufficient evidence exists for considering that vibrios, and such like organisms, prevail to a greater extent in the discharges from persons affected with cholera than in the discharges of other persons diseased or healthy, and monads (micrococci) may not be peculiar in their nature (for these do vary), and may not be the product of a peculiar combination of circumstances able to give origin to peculiar phenomena in predisposed persons—is not proven. Dr. MACNAMARA also asserts his conviction, after a long and attentive study of the subject, that fungi peculiar to cholera dejecta have not yet been discovered; that no doubt fungoid growths appear in this as in other nitrogenous matters undergoing decomposition, notably the *oidium lactis* and *mucor mucosus*; but neither are peculiar to decomposing cholera dejecta. Moreover, he desires particularly to affirm, that neither these nor any other fungoid growths can be discovered in fresh cholera stools. The more recent the specimen the clearer this fact appears. Dr. MACNAMARA has examined the contents of the intestinal canal for the appearance of mycelial threads or sporangia, and even after protracted collapse, has absolutely failed in numerous instances, in detecting any characteristic elements of the kind, and he states that he is reluctantly compelled to abandon his faith in the existence of any such growth. So far, therefore as fungi are concerned in the spread of cholera, I am satisfied that we have no grounds for such a belief. In the blood also there is a total absence of bacteria, fungi, or other extraneous bodies; but a great abundance of white blood cells, in a state of great activity, or of bodies which cannot be distinguished from the white blood cells. The red corpuscles have also

* Among the cases given in Phosburn's work is one where the infant was not actually born dead, but died an hour afterwards with all the symptoms of the epidemic disease."

been shown to be peculiarly different at their ends. The blood loses water, albumen, and salts, and is incapable of passing the capillaries with its usual freedom. It retains most of its coloring matter in its normal chemical composition, and Dr. THUDICHUM's observation led to the conclusion that any fermentation of the blood in the manner in which the intestinal contents are fermented, was very improbable. The blood absorbs water from the tissues; and there is no chemical evidence of any special cholera poison in the blood. The epithelium of the minor surface of the blood-vessels becomes detached and mixes with the blood, and the blood adheres to the blood vessels with great pertinacity. The secretion of bile is completely arrested, and in extreme cases a clear white fluid percolates through the hepatic ducts, free from bile, coloring matter and albumen. It seems to be simply water with a trace of alkali and a vestige of mucus. In some instances the fluid is colored, but contains no bile acids. The bile ducts shed their epithelium.

"They are always alkaline, consisting of a watery gruel or cream-like fluid, composed of thinner and thicker portions. Its consistence varies according to the varying quantity of its component parts. The thicker portions are flaky, stringy, curdy or clotted. When first passed, the rice-water evacuations soon separate into portions, the flocculent curdy matter sinking to the bottom of the glass or vessel in which it is contained, leaving a whitish fluid above. This separation of the material into two parts takes place rapidly in many instances, say in from one to three hours, and is evidence of the severity of the disease; for if the more solid matter of the dejecta collects in the lower part of the fluid very speedily, it indicates the complete death and disintegration of the organic matter. On the other hand, if the separation of the fluid and more solid components of the rice-water product takes place slowly, it is on account of the evacuation containing a considerable quantity of comparatively healthy mucus, and the case so far, allows of a more favorable prognosis. The flocculent matter of the stools is composed of epithelial cells, and the mucous lining of the intestinal canal in various stages of decomposition, but the perfectly fresh dejecta in the active stages of the disease contain no vibriones. Towards the end of collapse, when the evacuations are passed less frequently (probably remaining in the intestine for some hours) vibriones may be seen in the fluid immediately after it is passed."

On the basis of all the pathological phenomena and clinical data, the following seven stages of cholera may be distinguished:—(1) Fœcal diarrhoea; (2) choleraic diarrhoea and vomiting, quick sinking of temperature; leading to (3) asphyxia or collapse, in which the lowest temperature is reached; (4) reaction, which may be defined as the cessation of collapse and the beginning of the re-establishment of the suppressed functions; (5) torpid stage, or secondary period of algide stage, in which (reaction notwithstanding), the temperature remains below the lower normal limits, and then gradually or suddenly, rises to the normal average; (6) tepid stage, in which, during continued reaction, the temperature rises

to its normal or upper limits, more rarely somewhat above; (7) the febrile stage is only reached in cases where the entire algide stage has been very long, or where there are complications or secondary lesions arising out of the choleraic process. Reaction does not always terminate the algide stage. For although, from the moment of the beginning of reaction, the temperature rises somewhat in most cases, in the worst cases it does not reach the lower limits of normal fluctuation. The algide stage is evidently continued into the state of reaction, and the tepid stage is the result only of continued reaction. Reaction begins mostly with absorption from the intestinal canal within thirty-six hours from collapse, possibly also with some actual sorptions. It is not unreasonable to infer that, as in ague, the administration of quinine is of very little use after the effects of the poison produced by sporulation are well established. In cholera we have the additional reason for its decreased usefulness in that it is difficult to get it into the circulation during the collapse. A trial of this method this year failed to a large extent, possibly because of the large number of cases not seen till the stage of collapse was well advanced.

We can explain this on rational grounds—the quinine does not affect the spore formation once it has begun, but it can prevent it altogether. Hence the rule of giving it *at least four hours before the expected attack*. We have notes of over 1,000 cases in which we checked malarial fever by acting up to this rule. If the analogy holds good, there must often be no time in cholera for the quinine to act on the process until the evil is too far advanced.

I do not trust to the access of the alkaloid to the blood by its administration through one passage only—it is given by the mouth, by the rectum and by the hypodermic method. If this line of treatment is to be followed, no time is to be lost, for what is chiefly necessary is to get 30 or 40 grains of the drug into the system as speedily as possible, in fact we are to act on the same principle as if we were treating a case of malarial fever in which sporulation is continuous.

The process of sporulation is that which manufactures the poison in malaria and by analogy in cholera also. We cannot affect sporulation that is on, or which is in a stage preparatory to the setting free of spores, but we can check the commencement of sporulation, and that is I believe how quinine appears to act. It is a well-known fact that it is useless to give quinine during the pyrexia, or later than two hours before the fever comes on.

There are, of course, many cases in which cholera has been proved to be caused by the consumption of water polluted with rice-watery evacuations from cholera cases. But there have been many opposed to such a belief. CHEVREUS stated that no one had proved to his satisfaction that cholera stools contained a specific poison capable of propagating cholera to those who swallow it. He also states a fact often forgotten, viz., that nearly all Indian authorities who believe that cholera is communicable by dejecta, judge from their experience of epidemic cholera in the North-West Provinces, whereas receiving all who have long worked in Lower Bengal, the home or endemic area of cholera, doubt that this disease is at all communicable from man to man.

Dr. CURRIE further states that he bases the following remarks upon facts that have come under his own observation, or within his knowledge and experience:—

(1) If a strong epidemic wave rise among us, its destructive effects will not be under control, for (2) whatever treatment may be adopted, a very large percentage of those first attacked will probably die.

(3) In cholera outbreaks, he who enters the epidemic or endemic area encounters special danger.

(4) The incidence of cholera will always be heaviest upon the most insanitary localities. It is dangerous to travel in the cholera area. Those who are well lodged and in comfortable circumstances have a great prospect of escape if they remain.

There is little hope that the use of remedies given by the mouth are likely to be of any avail during the stage of collapse. Such treatment as is to be of avail must be given in the early stage—that of diarrhoea. If we see the cases at this stage, we can, I believe, reduce the mortality to below 20 per cent., and this we can do by the use of large doses of quinine.

In the year 1883 Dr. BLANC^o wrote an important paper on the subject of pernicious malarial fevers, and stated then what I now repeat, that in India the subject of pernicious malarial fevers has not received a tithe of the attention their great importance and frequency deserves. When we consider the fact that true Asiatic cholera maligna is much like one of the varieties of pernicious fever, this fact may be recognised.

Indeed, some authors have gone so far as to declare cholera to be a type of malarious fever, whilst others have limited this form under the name *malarious cholera*, to a particular variety of Asiatic cholera. The clinical characters of pernicious fevers are intermittency, whilst the intermission is marked by some symptoms of the pernicious attack which are enough in many instances to render the diagnosis doubtful.

In the scientific world of to-day, it is considered by many to be heretical to utter a single word against the doctrines of KOCH in regard to the ætiological relations of cholera; indeed, it would seem that his very statement in this respect is inviolable, and will remain so to the end of the chapter. We, however, have had a great deal of experience with cholera, and we have spent years in investigating its ætiology, and we are forced to express the conviction that we believe that the comma bacillus is altogether inadequate to produce such a profound change in the system as that brought about in cholera. We believe, on the other hand, that the organism is one which invades the system as a whole, and not the alimentary tract only. We further believe that if the parasitic organism we have discovered is not the cause of cholera, the cause remains to be discovered; and that discovery will take place within a very limited period—possibly before the close of the present century. Lastly, we would beg to state that in making the above remarks, we do not wish it to be thought that we are wanting in respect or admiration for the immortal ROBERT KOCH—far from it. We have the most profound reverence for his work; his perseverance and modesty; and lastly

we believe, that the work which he and PASTEUR have done has been the cause of a complete revolution in the treatment of specific and communicable diseases in man and the lower animals.

As a rule, I see one or more cases of cholera almost every day of the year; at least since January last there has only been an interval of sixteen days in which no cases occurred in the municipal township, of which I am the Health Officer. I have on several occasions this year, proved beyond all equivocation that certain wells were poisoned with cholera virus, for in several isolated outbreaks occurring amongst people who used the water of such wells, on the closure of the wells, and the supply of filtered hydrant water, the outbreaks ceased in every case.

We have no doubt but that were we able to carry on original investigations on the plains of India, some of the large number of medical officers who now devote themselves to the study of bacteriology would have long since proved the absolute absence of any ætiological relations between the comma bacillus and cholera.

There is one important fact associated with the comma bacillus: its presence enables us in almost all cases to diagnose cholera at once—about this we have no doubt. This rule, however, is not absolute, for we have met with at least two cases of cholera, possibly a third, in which it was absent, whilst we have also found it in cases in which the idea of cholera could not arise.

During the Commission that came out to India in 1885, Drs. KLEIN and H. GIBBES, after thoroughly investigating the subject, gave their opinion against it, and KLEIN is probably one of the greatest microscopists of the day.

Again D. D. CUNNINGHAM, who has done more original work in connection with cholera than any man living, does not believe in ætiological relations of the comma bacillus; in fact, he has himself described eight different varieties of this bacillus with distinct characters, and no doubt there are more.

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LEPROSY WITH SPECIAL REFERENCE TO KASHMIR.*

By A. MITRA, L.R.C.P., L.R.C.S. (Edin.)

Chief Medical Officer, Kashmir.

THE valley of Kashmir has a population of 949,041, of which 883,252 are Muhammedans and 65,789 Hindus. The inhabitants of the valley proper are distinct from the people living on the slopes of the mountains around. Rice forms the staple food of the Kashmiris, which they eat twice daily with boiled vegetables. Meat is also eaten, but daily only by the better classes. Fish, fresh or dried, is freely used. The majority of the people are agriculturists. The boatmen form a large bulk of the population, and they eat more fish than others. The boatmen on the Wular lake live principally on fish, which they cook in the form of pulp and eat with salt. Syphilitic diseases are the scourge of Kashmir. The rate of infant mortality is very high on account of syphilitic diseases. Syphilis is so widespread among all classes of people,

* Being a paper read at the Indian Medical Congress and sent to the Record for publication.

that it has almost assumed the magnitude of a national calamity. The habits of life of the people are very unclean, and there is an utter disregard of public and private hygiene. Among the people I have described, leprosy is a rare disease. A census of lepers was taken in 1890. It was taken unassisted by medical officers, and therefore, probably included many cases of diseases other than leprosy, and excluded many cases of true leprosy in the incipient stage. It also omitted to record the nationality. Many foreigners might have been entered in that list. It showed the total number of lepers to have been 404; male 168, female 84, Hindus 4 and Muhammedans 198. I have not met with more than 30 real Kashmiri lepers. What may be the cause of this comparative immunity of Kashmir from leprosy? It is a strange fact that the Kashmiris are almost surrounded by leper neighbours among whom the disease must have been prevalent for a long time. In spite of this, the Kashmiris living in the valley have been free from the disease. The slopes of the hills between the flat ground and the limits of snow on the Pir Panjal ranges of the Himalayas are a mixture of cultivating and grazing grounds and forest of cedar and pine. These slopes are inhabited by a people called Goojars or cowherds who keep buffaloes and cows. In winter the Goojars live at the foot of the hills and in summer in temporary huts on the mountains. Their food is Indian corn and wheat, and they also use milk and milk products abundantly. They live in ill-ventilated houses, often overcrowded with men and cattle. They are not well clothed. They are not beef-eaters, but occasionally indulge in buffalo meat. Among these Goojars leprosy is a common disease. Lepers are not allowed to mix freely in society in the Goojar country, and a leper has to take his food apart even from his nearest relatives. The lepers, therefore, usually come to Kashmir or go to adjoining districts in the Punjab for means of livelihood. The Punjab is very hot in summer and the Punjabi lepers find that during the hot season eruptions frequently break into ulcers which heal in the temperate climate of Kashmir. So annually, a large number of Punjabi lepers flock into Kashmir during summer and live on the charity of the Kashmiris.

Heredity.—Heredity is no doubt an important factor in the causation of leprosy. Such is the opinion I have found after careful enquiry among Goojar lepers. I have seen a family with three generations of lepers. Of course, in many cases, heredity could not easily be traced, but in all such cases unsatisfactory answers were elicited. To the question "Was your grandfather a leper?" the answer was "I cannot say as he died before I was born." (!) There are no doubt cases of acquisition, but among the Goojars, inheritance plays a more important part than acquisition.

Is leprosy contagious? I saw one instance of a wife acquiring leprosy from an affected husband. Five years after marriage the husband showed symptoms of leprosy; after another five years the wife became affected. When I saw the couple they had no children. I have seen in a family the grandmother, an old woman, suffering from a very bad type of ulcerative leprosy attended

with foetid discharge and sloughing. The affectionate daughters and grand-daughters nursed her without the slightest thought of themselves. The old woman died five years ago. None in the family is affected. From my experience I can cite no instance in which the disease was transmitted from a leper to any member of his family with whom he lived together and mixed closely in social life, except the one in which the wife was affected.

Though leprosy is not common among the Kashmiris, still Kashmir is resorted to by a large number of lepers for its climate and means of livelihood. These lepers freely mix with the people, sit, eat, and pray with them (lepers are usually found at the doors of Moslem prayer-houses), and no precaution against contagion is thought of, still the disease does not spread among the Kashmiris. In India and in the northern hilly countries we find lepers freely mixing with their relatives, walking about in public streets; leprosy husbands having progeny from their unaffected wives; in short, the public is exposed to the disease in every conceivable way. Does it extend in the proportion it ought if contagion by contact be admitted?

How then is leprosy transmitted? Accepting the bacillar theory of the disease, one could easily imagine that it may be passed from one individual to another by various means by which any other disease depending on germs, such as tuberculosis, may be transmitted.

Of course, contagion by inoculation is possible, and often takes place in various ways. All the different ways by which syphilis can be passed from one individual to another extra-genitally, hold good for leprosy. In India people usually have their feet and skin bare, and therefore there is every likelihood of inoculation. The question of compulsory segregation can only come when it is finally proved that leprosy is contagious by contact. It is no doubt a loathsome disease, with public feeling strongly against it. The word "leper" is synonymous with everything that is abhorrent. Whether this public opinion is right or wrong, we as scientific observers should lay aside our prepossessions, and steer clear of preconceived notions and prejudices. Then again, it is difficult to conceive how segregation can be complete, even if it were tried for experimental purposes. Is it always easy to recognize the disease in its early stages? Is it not very common that early stages continue for a prolonged period, during which the contagion, if any, will be equally communicable as in later stages? Does it not sometimes baffle even experienced physicians to recognize and distinguish the disease from several forms of skin diseases and neuroses? Will not the rich try to evade, and the poor be submitted to unnecessary hardships?

It is not easy to conceive how isolation can be humanely carried out, and how it can be complete, regular and perfect; and, unless it is so, its very object is defeated. I think however, that unless proved by fresh observations and experience, our present knowledge of the disease does not justify belief in contagion by contact.

However much we may differ in this and similar points, I have no hesitation in saying that free leper

asylums for the care of lepers all over the country is an absolute necessity for preventing the spread of the disease. Such asylums should be made attractive by clean hygienic surroundings, substantial and wholesome diet, recreation and diversion, and medical treatment and comforts. Then not only the poor but many of the middle class will voluntarily flock into them. In such asylums, not only caste distinction but also that of social position of the inmates should be observed. Those who are willing or can afford to pay will be paying inmates. Every District Board, which maintains a dispensary, should maintain a leper asylum also. By this means, segregation will be the practical result without raising any clamour or opposition. I believe that to the improvement of general sanitation and habits of life of the people, we are to look for the extermination of the disease more than to any measures of compulsory isolation. I also think that "arm to arm" vaccination is extremely dangerous in a country where leprosy is prevalent.

Hutchinson's fish theory.—The Goojars do not get any fish. I have for some time always asked lepers if they were fish-eaters, and in the majority of instances the reply was in the negative. The theory is untenable in India, where we do not find the disease more prevalent among fish-eating people than among abstainers of such food, as the *Vaimabs*. High class Hindu widows are strictly prohibited from taking fish, but I have seen several cases of leprosy among them. The Kashmiris, among whom leprosy is rare, are fish eating, fresh, dried and salted. But the positive fact that leprosy is common among Goojars, completely disproves the fish theory.

Treatment.—In the treatment of leprosy, I have given trial to chalmugra oil, gurjon oil, neem (*azadirachta indica*), both internally and locally. I have also tried arsenic, phosphate of soda, mudhar (*calotropis gigantea*). In the ulcerative stage local applications of gurjon oil, or neem oil, prove of some value in healing and checking factor. Creolin or izar does the same. My experience is that none of the above remedies possesses any power in arresting the disease.

In the anæsthetic variety I have practised nerve-stretching in over a hundred cases. I am of opinion that in the early stage, nerve-stretching produces some satisfactory result. The tracts, supplied by the nerve or nerves stretched, regain sensation partly, trophic ulcers heal rapidly, and the general health of the patient, improves; but these results are not lasting. A patient whose nerve has been stretched and who has left the hospital with his condition improved, encouraged by the previous result, usually comes back for treatment with the same condition as before, and probably with lesions spread over other parts, such as the face. This treatment can therefore, be safely called a palliative one, applicable in certain classes of the disease in its incipient stage.

I have never seen a leper cured, but, under strict medical care, he can be made comparatively free from his troubles and his sufferings can be alleviated.

THE CONTAGIOUS DISEASES' ACTS IN INDIA : THEIR COMPLETE FAILURE, PROVED FROM AUTHENTIC RETURNS.

By W. C. MARGE.

Calcutta.

If it were true that the consequences of immorality could be prevented by physical arrangements, without any moral reform in the mind of the immoral man, all moral law would be extinguished, because it would be stultified by facts; for it would then only remain for people bent on self-indulgence to choose their vice and find out the method of satisfying it in safety.

No intelligent opponent of the Contagious Diseases' Acts has ever objected to the tenderest care being taken of any victims of venereal disease, male or female. On the contrary, the most effective treatment of all such sufferers has always been advocated with a view to their restoration to a virtuous life after the cure of the bodily suffering. What has been objected to is the compulsory subjection of woman alone to personal restraint, usually including gross outrage, not with a view to their reform and removal from a career of vice, but with a deliberate purpose of physically preparing them to continue the practice of vice, while their male partners in immorality are left entirely free, even when in a diseased condition, to indulge in vice and thus spread the very disease which a solemn pretence is made of wishing and trying to suppress. Is not this sacrificing the liberty of women to the license of men? If the system of so-called "Protection" introduced by the Acts had ever succeeded anywhere, its success would for the first time in human history have not only shown morality and science to be in deadly conflict, but would also have resulted in the abolition of morality. A chain is no stronger than its weakest link, and a practical world could not afford to be governed by a theory of ethics which had been broken down in practice.

To prove that this system of "Protection" has not only not succeeded in India, where it has been on trial for nearly twenty-five years, openly for the greater part of that time, and secretly for the last three of these years, but has completely failed, is the object of this paper, to which the earnest and careful attention of all honest men is solicited.

Its figures are all taken from authenticated official sources, to which reference is in every case made.

The history of medical effort to suppress venereal disease in the British Army in India divides itself into three periods:—

(1) The period before the introduction of the C. D. Acts.

(2) The period of the working of these Acts; and

(3) The period following the abolition of these Acts.

I. The following extract from para. 14 of the Memorandum of the British Army Sanitary Commission on the report of the Sanitary Commissioner with the Government of India for 1889—dated London, War Office, August 28th, 1891—contains the verdict of the highest military-medical in the British Empire, which is finally responsible

for the sanitary arrangements of the British Army, on the first of these three periods:—

"These (Lock) Hospitals existed for 18 years, from 1867 to 1884 inclusive. The figures for the individual years 1870-79 are not given, but it appears that during these ten years the average annual admissions from venereal disease were : for Bengal 209, Madras 189. Bombay 292 ; and all India 294. *Instead of a decrease there had been a marked rise, amounting roughly to about one-third in each Army.* And what is still more worthy of notice is that *the statistics of 1866, before lock hospitals were established, are much more favorable than those of 1884, when these hospitals had been at work for 18 years.* The figures of 1866, apparently, are not available for Bombay ; but for Bengal they give 217 cases per thousand in 1866, and 290 in 1884 ; for Madras 236 in 1866, and 300 in 1884 ; or, if comparison be confined to the more serious forms of primary disease, we find that in Bengal the rates rose from 64 in 1866 to 86 in 1884, and in Madras from 30 in 1866 to 101 in 1884."

The outstanding facts of this declaration are, first, that, as regards a particular period of 10 years from 1870 to 1879, during which the Acts were in full operation, there was not only no decrease in disease, but a "marked rise ;" and second that, as regards the entire period of 18 years during which the Acts were enforced, the prevalence of disease, as shewn in hospital admissions, and whether as respects secondary or primary disease, was worse at the end of the period than before the Acts were introduced.

The figures for the individual years from 1870 to 1879, which were omitted from the Indian Sanitary Commissioner's Report for 1889, will be given further on together with the figures for all the intervening years down to 1885 ; and they will shew that, with slight fluctuations, there has been a progressive increase in disease during the whole period of the operation of the Acts ; but the point which unbiassed minds will fasten on at this stage is that, in the final judgment of the British Army Sanitary Commission, the British Army in India fared better before the introduction of the Acts than after it.

To prevent any charge of unfairness, or of mutilating extracts, a further quotation is here made from the above para. 14 of the same document ; though it will best be fully considered later on. It is this :—

"The (Indian) Sanitary Commissioner would explain these remarkable results by 'the greater youth and inexperience of the soldier, the smaller proportion of married men, and the more frequent and extended movement of troops ;' and it is to be borne in mind that the short service system came into force in 1870, and has been in operation since that time. Whatever degree of importance however, is to be attached to these causes of increase, the fact remains that the expectation of benefit to be derived from lock hospitals when they were established was very far from being fulfilled."

The true character of the boast that the Acts were preventive, and that disease could be entirely suppressed under them, is here clearly revealed. What the Indian Army Sanitary Commissioner evidently contends, is that the Acts would have proved preventive and disease would

have been suppressed, if soldiers had been older and married, and there had been less frequent and less extensive troop movements. This interesting speculation, which certainly reveals more of the originality of the Indian Sanitary Commissioner than of the facts of disease in the Army, will be presently considered. The facts meanwhile are, that the Army fared better before the Acts than during their incidence, and that the benefit expected from them was not realised.

II. In considering the second period, it is necessary to go to the late Dr. BARCLAY's note on the "Experimental closure of several Indian Lock Hospitals during 1885," because it was published authoritatively in 1886 by the Indian Sanitary Commissioner as the unanswerable defence of the Acts by the Indian Medical Department, and because—though strangely suppressing some striking figures, which have been otherwise obtained, and are given below—it contains several groupings of figures which are not otherwise accessible to the public.

As this note of Dr. BARCLAY's was considered a masterpiece of scientific reasoning, and has often been incorrectly referred to as establishing beyond question the prophylactic virtues of the Acts, it is only fair, before examining Dr. BARCLAY's methods of reasoning, to realise plainly the basis from which he starts, and the limitations which he acknowledges. He says:—

"The utility of any special measures against these diseases had come of late years to be greatly doubted, and this especially because, in spite of the continued operations of certain laws enacted in 1864, to suppress and, if possible, extirpate them, *these diseases have given rise to progressively higher admission rates of late years.* The rise in the admission rates, especially since 1877, led many to believe that the futility of protective measures was fully established, and that it was desirable at once to put an end to them as involving a useless expenditure of public money. Before however, finally condemning the system, it was resolved, early in 1885, to view the effect of the measures in operation in the light of an experiment to be made by closing selected lock hospitals throughout India during one year, and comparing the prevalence of venereal disease among the troops quartered at these cantonments with that existing in them before the experiment and with the venereal prevalence exhibited in stations still protected."

Unless the result of the experiment tried in 1885 proved, beyond question, that mitigation of disease corresponded in some recognisable way with "protection," the experiment could in no way tell against the experience of the preceding 15 years, which shewed progressively higher admission rates under the operation of the Acts.

Two preliminary remarks, have to be made at this stage about two suggestive differences, not merely of opinion, but in methods of judgment, between the advocates and opponents of the Acts. The first is that, as Dr. BARCLAY professed to desire to draw his inferences from a "wider basis" than that which had been previously employed, he ought, instead of selecting the figures of particular stations, while carrying out his experiment in chosen stations, to have submitted the figures obtained from every station, during the period of his experiment, without exception

so that the comparison to be made should rest upon the widest possible basis available. This was the more necessary, for purposes of scientific accuracy, not to say fidelity, because, while even the figures of the selected stations were not favorable to the theories which Dr. BARCLAY tried to extort from them, the figures of the entire field covered by the Acts during the same period, which have been obtained independently of Dr. BARCLAY, are not merely less favourable, but absolutely fatal, to his theories. The second remark is that Dr. BARCLAY, instead of proceeding to examine his statistics with an open mind, undertook their examination with a bias which made the discovery of the truth by him, if he desired to discover it, impossible. As this is a strong statement, its proof had better be given here in his own words. When confronted with increases of disease in protected stations, instead of at once recognising in them arguments, so far as they went, against the efficiency of the Acts, he made up his mind, firstly, that the protective system could not be at fault, and then set about discovering or inventing other causes to explain the facts that thwarted him. "It was quite evident," he says, with either astounding *nuivete* or astounding effrontery, that "some new cause or causes had come into operation to account for these progressive ratios; for, even assuming that the means taken to repress these diseases were entirely powerless, it could scarcely be contended that they actually fostered disease." The only escape from a charge of wilful unfairness, when making such a statement as this, lies in pleading guilty to entire ignorance of the very elements of the controversy on the subject—a controversy of nearly twenty years' standing, with an elaborate literature of its own; for, if there is one point on which the opponents of the Act have always and everywhere insisted (and as regards which they are now borne out by the final verdict of the British Army Sanitary Commission), it is that the enforcement of the Acts has not only not suppressed, but has uniformly aggravated disease. And this opinion, apart from being generally based on experience, was supported by the particular facts that (1) in many examined cases, certification of cleanliness has proved no protection whatever, although, to speak plainly, (2) it has attracted customers and so increased vice, while at the same time (3) men have been known to contract disease, apparently from one another, by resorting in quick succession to certified women in whom disease could not be traced; and finally (4) the concentration of vice among limited female victims of the system has not only destroyed them faster, but in so doing has increased the number of male sufferers from them. Now these differences of opinion, whether sound or unsound, claim a scientific basis in ascertained facts, which have been and can be substantiated; and the audacity or dullness which ignores them, and impudently assumes, without any attempted disproof of them, that the Acts cannot be said to increase disease, should be clearly realised by all honest students of all further statements and conclusions from the same source. Even if unconscious, such manipulation must prove misleading.

The following figures are taken from para. 9 and 10 of Dr. BARCLAY's note:—

Where the Acts were suspended.

| Stations. | Admission Rates. | |
|-------------|------------------|-------|
| | 1875-1884. | 1885. |
| Chuckrata | 164.7 | 129.0 |
| Murree | 124.8 | 184.7 |
| Kussowlee | 116.1 | 343.2 |
| Meerut | 271.5 | 511.9 |
| Allahabad | 315.7 | 527.6 |
| Rawalpindi | 200.1 | 482.2 |
| Meeran Meer | 230.3 | 382.7 |
| Peshawar | 185.8 | 373.5 |
| Delhi | 206.3 | 246.2 |
| Cawnpore | 287.8 | 329.1 |

Where the Acts continue to be fully enforced.

| | | |
|--------------|-------|-------|
| Dum-Dum | 253.0 | 351.9 |
| Barrackpore | 293.9 | 248.8 |
| Dinapore | 267.8 | 311.6 |
| Agra | 307.6 | 434.1 |
| Bareilly | 267.3 | 471.0 |
| Benares | 466.1 | 527.0 |
| Roorkee | 205.9 | 351.5 |
| Muttra | 260.4 | 188.0 |
| Jhansi Lucka | 187.0 | 243.7 |
| Lucknow | 317.8 | 381.8 |
| Faizabad | 278.3 | 317.0 |
| Seetapore | 310.2 | 318.6 |
| Jullundur | 251.2 | 226.0 |
| Umballa | 212.9 | 328.4 |
| Sialkote | 300.2 | 324.9 |
| Ferozepore | 180.2 | 208.7 |
| Mooltan | 239.0 | 250.6 |
| Nowshera | 180.2 | 404.0 |
| Saugor | 272.9 | 220.4 |
| Jubbulpore | 341.8 | 473.2 |

It will be seen from these figures that, with the single exception of Chuckrata, among the ten unprotected stations, and with the four exceptions of Barrackpore, Muttra, Jullundur, and Saugor, among the 20 protected stations, there was an increase in the admission rate per thousand in all other stations. One striking fact is that the decrease shown in the unprotected station of Chuckrata is better than any decrease shown in any protected station, a fact of some importance and significance in relation to the complementary fact, which may be mentioned here in passing, that, in the year of this experiment, 1885, the very worst increase in disease in any station in India was shown in the protected station of Wellington in the Madras presidency. If this system of protection had any scientific consistency, and bore any analogy to the system of vaccination, it would be as though small-pox had broken out most virulently in some place where vaccination had been thoroughly carried out, and had broken out most mildly in a place where there had been no vaccination at all. Not to make too much, however, of this curious double fact, it will be seen that, in the great majority of stations, protected and unprotected alike, the admission rate of 1885 showed an increase over the average admission rate of the preceding ten years from 1875 to 1884 inclusive. What Dr. BARCLAY strangely extorted from this verdict of facts against his system was the curiously unscientific assumption that because, on the whole, larger increases were recorded in the unprotected than in the protected stations, therefore the increase in the unprotected stations must be owing to the want of protection; whereas the increase in the protected stations

must be owing to some other causes! Some scientific consistency might perhaps have been put into this assumption, if the efficiency of protection had been placed beyond question by all past experience—as it has been, for instance, in the case of vaccination; but seeing that, as DR. BARCLAY admits, past experience had been so unsatisfactory as to have aroused doubts of the efficacy of the system up to 1884, and a year's grace had been allowed for a testing experiment in 1885, it would be difficult to match the impudence of the assumption. Even if plausible reasons could be given for the recorded increases in protected stations, it would be necessary to show that these reasons were not also responsible for increases in unprotected stations. But before examining these reasons, it is well to glance at the following figures obtained from official sources independently of DR. BARCLAY, and most unjustifiably suppressed by him in his memorandum:—

Bengal.

| Stations. | 1884. | 1885. |
|--------------------|--------|----------|
| 1. Barrackpore ... | 146.2 | 194.17+ |
| 2. Darjeeling ... | 170.12 | 186.91+ |
| 3. Dum-Dum ... | 264.3 | 345.94+ |
| 4. Dinapore ... | 265.21 | 219.80 - |

North-Western Provinces and Oudh.

| | | |
|-----------------------|-------|--------|
| 5. Agra ... | 284.0 | 434.9+ |
| 6. Bareilly ... | 235.0 | 484.8+ |
| 7. Benares ... | 309.0 | 365.8+ |
| 8. Fategarh ... | 315.0 | 360.2+ |
| 9. Faizabad ... | 192.3 | 229.3+ |
| 10. Jhansi ... | 136.2 | 169.9+ |
| 11. Lucknow ... | 240.6 | 296.8+ |
| 12. Moradabad ... | 403.6 | 971.8+ |
| 13. Muttra ... | 295.8 | 161.7- |
| 14. Naini Tal ... | 273.2 | 304.1+ |
| 15. Ranikhet ... | 262.8 | 241.8- |
| 16. Roorkee ... | 217.6 | 345.4+ |
| 17. Shahjahanpore ... | 284.0 | 326.3+ |
| 18. Seetapore ... | 228.6 | 220.5- |

Punjab.

| | | |
|--------------------|--------|----------|
| 19. Attock ... | 277.22 | 136.69 - |
| 20. Dugshai ... | 211.83 | 278.26+ |
| 21. Dalhousie ... | 212.21 | 72.37 - |
| 22. Ferozepore ... | 154.64 | 153.85 - |
| 23. Jullundur ... | 319.49 | 289.41 - |
| 24. Multan ... | 279.80 | 255.67 - |
| 25. Nowshera ... | 144.34 | 299.81+ |
| 26. Umballa ... | 200.78 | 425.83+ |
| 27. Sabathoo ... | | 244.51 |
| 28. Sialkote ... | 290.22 | 267.59 - |

Central Provinces.

| | | |
|----------------------------|--------|----------|
| 29. Jubbulpore ... | 405.4 | 432.79+ |
| 30. Kanti ... | 179.4 | 264.46+ |
| 31. Pachinari ... | 235.77 | 149.12 - |
| 32. Saugor ... | 184.4 | 126.63 - |
| 33. Hyderabad—Secunderabad | 242.45 | 244.12+ |
| 34. British Burmah ... | 176.86 | 198.8+ |

These figures^o show that, of a total of 34 hospitals given in this return, if we leave out Sabathoo, which affords no material for comparison, we have 33 hospitals,

in only 12 of which disease decreased in 1885, while in 22 of them disease increased. Not only so, but if the figures are scrutinised, it will be seen that, excepting Dalhousie, where the improvement in 1885 was very marked, in the majority of the other 11 stations the improvement was trivial, whereas in many of the 21 hospitals in which disease grew worse, the decline was of a serious character. Now 1885 was the year of special experiment, in which protective arrangements were being specially tried; and if the protective system were judged by the result of 1885 alone, they would have, in sheer honesty, to be confessed a complete failure. If, up to 1884, grave doubts existed of the utility of the system, and the results of 1885 declared it an utter failure, with what honesty, (not to speak of scientific precision,) can intermediate averages be cooked up in 1886 to secure any other verdict?

Of what use is a special experiment in a particular year if, when the system on trial is proved a disastrous failure, we refuse to accept the evidence, in the sense in which it has been uniformly interpreted, and fly back on the manipulated averages of an anterior period—which has been acknowledged to tell against the system—in order to extort proofs in favor of a foregone conclusion? Whatever excuse may have been manufactured for confining the comparison to the stations in which the system had been tried for an equal number of years, it is impossible to justify the suppression of the figures just quoted. If the value of any medicine were being tested, and its use in ten stations, in which it had been tried for ten years, was carefully examined, but it was found that in twenty stations, in which it was used in the year before the enquiry, it was found to be deadly in its effects, it would surely be equally ridiculous and dishonest to exclude all consideration of these deadly effects, merely because, in 10 of these 20 stations, the medicine had been used for longer or shorter periods than in the other 10.

With these facts before him, the intelligent statistician will hardly demand any special examination of the methods in which DR. BARCLAY has tried to explain away the unquestioned increase of disease in protected stations. He attributes it to three main causes: (1) the youth of the soldiers under the Cardwell Scheme, (2) the unmarried condition of the majority, and (3) movement of troops, which is said to increase disease. The objections to the first two explanations are that the years of the greatest accession of young men do not correspond with the years of the greatest prevalence of disease, and that until the actual disposition of the married strength is accurately recorded—which no attempt is made to do—it is impossible to study it as a factor in the etiology of disease. As regards the third explanation, not only does it fail to explain increases in stations entirely off the line of large troop movements in particular years, but no attempt is made honestly to trace its effects in unprotected stations. If troop movements actually increase disease, why should they not do so in unprotected as well as in protected stations? In fact, it is loosely assumed, as already shown, that protection must effect disease, and the want of it increase it; and the position really taken up throughout is that, inasmuch as there must

^o Taken from Twelfth Report of working of Lock Hospitals in North-Western Provinces and Oudh, 1885: Annual Report of Punjab Lock Hospitals, 1885: Review by Chief Commissioner of Report on Lock Hospitals Central Provinces, 1885: Annual Report of Working of Secunderabad Lock Hospitals, 1885: Report on Lock Hospitals, British Burmah, 1885: Annual Reports on Bengal Lock Hospitals, 1885, with Government Resolution thereon.

infection of disease in all stations, it can only be owing to the want of protection in unprotected stations, but must be owing to some other causes in properly protected places! Everything comes to the statistician who expects; and it is not perhaps surprising that to the mind brought by Dr. BARCLAY to the figures examined above, the figures echoed the astonishing conclusions which they did.

The foregoing figures relate to the Bengal Command, and have been selected from Dr. BARCLAY's figures, not because the Madras and Bombay figures, with which it is unnecessary to burden this production, differ in any characteristic feature from those of Bengal, but because other figures for testing their value by comparison have not been so easily procurable by the writer as figures from Bengal. But the following figures taken from Dr. BARCLAY's own note, and relating to all India, will shew at a glance the general and steady growth of disease prevalence between 1871 and 1885, inclusive, 15 years during which the Acts were enforced throughout India:—

| | | |
|--------------|--------------|--------------|
| 1871...196.8 | 1876...189.9 | 1881...260.5 |
| 1872...179.0 | 1877...208.5 | 1882...265.2 |
| 1873...166.7 | 1878...271.3 | 1883...270.3 |
| 1874...192.7 | 1879...234.8 | 1884...293.9 |
| 1875...205.1 | 1880...249.7 | 1885...342.7 |

The Acts having been enforced in all cantonments from 1871 to 1880, and suspended in a few stations between 1881 and 1884, irrespectively of the special experiment tried in 1885, it appears that though, in spite of occasional fluctuations, there was a general tendency to increase during the incidence of the Acts, yet there seems to have been a much more rapid growth from 1871 to 1878, when the Acts were enforced everywhere, than during the four years from 1881 to 1884, when the Acts were withdrawn from some localities. Even the large figure 293.9 in 1884 does not shew such a big jump from the figures of any of the three preceding years as that disclosed between 1871 and 1877, or even between 1877 and 1878. Whatever the cause of this state of things, the fact is undeniable that disease increased at a much worse rate during the general enforcement of the Acts than during their partial suspension: while, so far as Dr. BARCLAY's review was concerned, the very worst results were secured in 1885, the year of the special experiment, when it may be reasonably assumed that the advocates of the Acts, who were in charge of the measures taken under it, were doing their best to obtain satisfactory results under it. It has been said indeed, that anything can be made of statistics. But it is only fair to remember that the statistics here utilised have been furnished by the supporters of the Acts and endorsed by the Indian Medical Department as affording a conclusive mathematical demonstration of their success.

III. It remains only to consider the period following the abolition of the Acts. Of this period the years 1889, 1892, and 1893 are here taken up only, because the figures relating to them have been considered bad, have been published with some amount of outcry, and have formed the subject of special recommendations made by the Indian medical authorities to the British Army Sanitary Commission. Some reference has been made in the

opening remarks of this paper to the verdict of the British Army Sanitary Commission upon some of them. It may be added that the figures were considered so different from those of earlier years that the British Army Sanitary Commission "could not help enquiring whether they have been prepared throughout on the same system, or some changes have been introduced which may account for at least part of the increase." (1) No answer has been published to this enquiry; and the fact is significant in view of the suspicion that changes have been made, if not as some professional witnesses have publicly stated by the inclusion of diseases not strictly of a venereal character, though aggravated by venereal complications, at any rate by reckoning every re-admission of the same man as a new diseased man. Immorality belongs to individual identities, and if a man is admitted 3 or 5 times a year to hospital for this disease, he still remains one and the same individual, and the 30th part of a corps of 500 men; and it is monstrous to reckon him as 3 or 5 different men, for the dishonest purpose of representing 30th or 50th, i.e. 10th part of the corps, as being disabled from disease all the year. At any rate, we have seen what view the highest medical Military authorities in Britain have taken of the figures of 1889.

Of those for 1892, we find the British Army Sanitary Commission saying, in page 160 of their report, just published:—

"For the last five years the general venereal ratios for the European army of India stand thus° per 1,000 of strength. The ° 1888 ... 370.6 ratio for 1892 shews an increase of 1889 ... 418.5 9 cases for 1,000 over 1891, but the 1890 ... 503.5 rate for 1891, it will be observed, was 1891 ... 400.7 over 100 per 1,000 less than it was in 1892 ... 409.9 1890. Still, even with this diminution

as compared with 1890, it admits of no question that in 1892 venereal disease prevailed among European soldiers in India to such an extent as to constitute a most serious cause of inefficiency. In a separate memorandum, which we submitted in December 1893, we discussed this question at length, and gave the reasons why we arrived at the conclusion that the evil had been very slightly mitigated in India under the Lock Hospital system, and that the re-introduction of the system on sanitary grounds could not be recommended."

Apart from the double verdict, pronounced on the system in 1891 and repeated in 1892, we observe the same fluctuations in admissions which have characterised the returns of earlier years. The reader will remember that in 1890, when the Acts were supposed to have been abolished, they were being secretly carried out in several Indian cantonments; so that Lord ROBERTS, who contradicted this discovery when it was first made, subsequently apologised for his denials and admitted its accuracy. The increase of disease in these years, when the Acts were being secretly enforced, rather bears out the contention of their opponents that they have always promoted disease.

Of the figures for 1893 the only detailed account yet before the public will be found in the "Army Medical Department Report for the year 1893, Vol. XXXV," lately published in London, from pages 109, 136, and 142

at which, *namely*, respectively to Bengal, Madras and Bombay, the following figures have been taken:—

| | Admissions. | Rates per mille. | Constantly sick. | Ratio. |
|--------|-------------|------------------|------------------|----------|
| Bengal | 19,348 | 449.9 | 1598.99 | 36.77 |
| Madras | 6,447 | 488.0 | ... | 42.76 |
| Bombay | 6,268 | 463.8 | ... | 33.63 |
| Total | 32,058 | 3)1890.7 | ... | 3)113.16 |
| | | 465.5 | ... | 87.72 |

It will be seen that the total admissions in all India aggregated 32,058, giving an average admission rate per thousand of 465.5, with a "constantly sick" average of 1598.99 for Bengal, and a total ratio of "constantly sick" for all India, of 87.72. It is to be regretted that the total "constantly sick" for all India, while indicated in a manner by the ratios per thousand given for Madras and Bombay, are not plainly stated in figures as for Bengal. However, the ratios of "constantly sick" given for Bombay and Madras, when considered in relation to the total admissions for the three presidencies given in the first column, which shows that the whole admissions for Madras and Bombay were about two-thirds of the total admissions for Bengal, enable us to estimate that the "constantly sick" in Bombay and Madras, if not less than 1,062, would not be more than 1,593; giving a rough, freely estimated total of 3,000. With these figures before us, it must have surprised all informed students of the subject to find the Hon'ble Sir G. WHITE, Commander-in-Chief in India, making the following strange statement in the Legislative Council of India on the 7th February last:—

"The extent to which disease prevails in the Army, and the probability that the removal of restrictions that could formerly be enforced would increase the extent of this disease, and the consequent inefficiency of the Army, have been exhaustively put before Her Majesty's Government. How necessary such a representation is, may be inferred from the fact, now notorious, that in the year 1893 the admissions to hospital for disease alone among our British soldiers in India were 466 per thousand. This is practically 50 per cent. of strength. For a rough and ready calculation this proportion may be adopted, and it gives us, out of a total of 70,000 British soldiers, 35,000 admissions to hospital for diseases every year."

The gravest objection to this unfortunate misrepresentation, of which His Excellency has doubtless been made the unconscious mouthpiece by military-medical advisers, is not that the ratio of admission has been overstated by a fraction, and the total admissions overdrawn by about 3,000 men when the actual figures, as shewn above, were available, and would be preferable, but that the Commander-in-Chief has unaccountably overlooked the real meaning of the Hon'ble LEE WARNER's question "whether the statistics of admission included re-admission of the same diseased patient, which are counted fresh admissions," and His Excellency's answer, "Yes." As a matter of fact, not only is it unjustifiable to reckon actual admissions at 35,000 when only 32,058 are exactly known to have occurred, but it is surely inexcusable to reckon every admission as a man, when it is known that certain men, whatever their number, were admitted

more than once; *namely*, according to the statement, men go in and out of hospital several times, for long periods, sometimes at least remaining for a few days, if sometimes longer; even the very doubtful statement of which no proof is given, that 30 days form a fair average of the length of treatment for all kinds of venereal disease, would not affect the undeniable fact that the daily average of men in hospital is the only correct test of the number of men incapable of taking the field. The return of "constantly sick" therefore affords a more accurate estimate of the inefficiency of any fighting force than the total admissions during a whole year. To count a man who may be in hospital five times a year as five diseased men, when, of a band of 20, he may be the only diseased one against 19 healthy men, and to reckon him as one-twentieth of 100 fighting men, when he is only the one-hundredth, is surely a trick which the head of the army, if he had been carefully informed, could never have encouraged, and indeed may be depended on now that it has been discovered, to visit with his displeasure. Taking the total of the admissions at even 35,000, the figure given by Sir G. WHITE and the "constantly sick" at from 3,000 to 3,500, which His Excellency will find a large allowance, it is seen at a glance what a number of re-admissions of the same persons must have taken place. Taking the total British Army at 70,000 and the "constantly sick" at even the large figure of 3,500, we find the inefficiency caused by venereal disease to amount at the outside to one-twentieth of the entire force, which is a very different figure to the one-half, or 50 per cent., to which His Excellency's medical advisers have committed him.

One consequence of blindly floating down arguments on figures furnished by incompetent advisers is seen in the following painful statement made by the Commander-in-Chief, which involves a grave wrong to all the married soldiers, and all unmarried men of good character and blameless life, in the Army:—

"The same figures show that in two years the whole British Army in India will have been treated in hospital for disease. The inefficiency that this wholesale infection must bring about under the hardships and exposure of a campaign, I cannot reduce to figures, but at the same time I cannot contemplate it without the gravest apprehension."

Is it seriously believed by any sane surgeon in the British Army in India that in the course of two years every British soldier will have been incapacitated for war service by venereal disease? If not, who is responsible for putting this mis-statement into the mouth of the Head of the Army, and getting the insult authoritatively published? If the picture which His Excellency has tried, at the suggestion of untrustworthy advisers, to impress on the public imagination were true—if, in two years, every soldier became infected, and if many men or any men, were admitted more than once, and the present inaccurate method of reckoning every admission of the same man as another man were continued—as why should it not, if it is adopted now?—we should be confronted with the *reductio ad absurdum* of the mental processes of the Indian Medical Department in a return of men rendered inefficient by disease, whose number exceeded the entire recorded strength of the British Army!

DISINFECTANTS: THEIR ACTION AND USES.

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(Continued from page 329, Vol. VIII.)

CHAPTER XIII.

GERMICIDAL DISINFECTANTS THAT REQUIRE COMPETENT SCIENTIFIC APPLICATION: BROMINE, CHLORINE, EUCHLORINE, AND IODINE—THEIR CHARACTERS AND ACTIONS.

BROMINE.

(467). BROMINE = $\text{Br} = 80$, is a powerful aerial disinfectant having properties much in common with iodine, but it should not be disengaged in large quantities, and great care should be taken to prevent excessive evolution, as its vapour is highly irritating to the eyes and lungs.

CHLORINE.

(468). CHLORINE = $\text{Cl} = 35.5$, does not occur free in nature though in combination with sodium it is found native in large quantities in the form of salt (NaCl). It is under ordinary conditions a bright greenish-yellow gas, (specific gravity 2.44), with a highly corrosive action and an asphyxiating insupportable odour, but under a pressure of five atmospheres it may be condensed into a yellowish liquid (sp. grav. 1.33) which no amount of cold can reduce to the solid state. Chlorine, however, freely dissolves in about one-third of its volume of water, and if this solution be subjected to sufficient cold (0°C) it will deposit crystals which have the formula $\text{Cl}_2 \cdot [10(\text{H}_2\text{O})]$. Under the influence of light it combines directly with hydrogen, but such combination cannot take place in the dark unless the chlorine had been *insolated*, i.e., first exposed to sunlight for some time.

(469). It also combines *directly* with most of the metals, and more particularly with mercury, over which it cannot, therefore like other gases, be collected.

(470). In presence of water it acts as an energetic oxidiser, appropriating hydrogen and liberating oxygen which (latter), while in the nascent state, has very great affinities for all substances whose oxygen-combined molecule is unsaturated. Thus *sulphurous* acid is rapidly formed by chlorine into *sulphuric* acid. $[\text{H}_2\text{SO}_3 + \text{Cl}_2 + \text{H}_2\text{O} = \text{H}_2\text{SO}_4 + \text{O} + \text{Cl}_2 + \text{H}_2 = \text{H}_2\text{SO}_4 + 2(\text{HCl})]$

(471). Chlorine may be prepared (a) by heating hydrochloric acid with binocide of manganese $[\text{MnO}_2 + 4(\text{HCl}) + \text{Aq} = \text{MnCl}_2 + 2(\text{H}_2\text{O}) + \text{Aq} + \text{Cl}_2]$; (b) By acting with sulphuric acid on a mixture of common salt and manganese dioxide: $[\text{MnO}_2 + 2(\text{NaCl}) + 2(\text{H}_2\text{SO}_4) = \text{MnSO}_4 + \text{Na}_2\text{SO}_4 + 2(\text{H}_2\text{O}) + \text{Cl}_2]$; (c) By exposing chloride of lime to the action of dilute sulphuric acid $[(\text{CaOCl}_2) + 2(\text{H}_2\text{SO}_4) = 2(\text{CaSO}_4) + 2(\text{H}_2\text{O}) + \text{Cl}_2]$

(472). It discharges vegetable colors, bleaches organic pigments, purifies the air, destroying mal-odours, and noxious effluvia $[2\text{SH}_2 + \text{Cl}_2 = 2(\text{HCl}) + \text{S}]$, and misamata as also modifies organic matters (rendering them more or less innocuous) by one or more of three ways:—

(a) By appropriating for itself and then abstracting the hydrogen which these bodies contain. Thus:—alcohol is converted into aldehyd and hydrochloric acid is formed $[\text{C}_2\text{H}_5\text{O} + \text{Cl}_2 = \text{C}_2\text{H}_5\text{O} + 2(\text{HCl})]$, while a portion of the carbon is deposited.

(b) By substituting itself for some of the hydrogen and combining with the hydrogen displaced $[\text{C}_2\text{H}_5 + \text{Cl}_2 = \text{C}_2\text{H}_4\text{Cl} + \text{HCl}]$.

(c) By indirect oxidation where, in the presence of water, the chlorine attacks the organic substance, seizing upon a portion of its hydrogen and liberating the oxygen that was in combination with the abstracted hydrogen, and consequently that portion of the organic matter that has been decomposed by the chlorine yields up its oxygen to the other portion, making it deposit a good part of its constituent carbon.

(473). EUCHLORINE, which practically is a mixture of chlorous acid with free chlorine, may be slowly disengaged by throwing small quantities of chlorate of potash into an open vessel containing fuming hydrochloric acid. It has a similar effect on organic matters as has chlorine than which it is less unpleasant to smell. A similar decomposition may take place by electrolyzing sea-water on which is based the Hermit system of disinfection that has given such grand results in the experiments lately tried at Worthing and Havre.

IODINE.

(474). IODINE $\text{I} = 127$. Though found in large quantities combined with sodium in *Kelp*, Iodine does not occur free in nature. To obtain it the kelp is carefully dried and slowly burned and then extracted with water: The contained chlorate of potash (KClO_3), hyposulphite of sodium ($\text{Na}_2\text{S}_2\text{O}_4$) and sodium sulphide (Na_2S) are removed by crystallising out and the mother liquor is then distilled (at a temperature not exceeding 212°F) with sulphuric acid and binocide of manganese $[2(\text{NaI}) + \text{MnO}_2 + 2(\text{H}_2\text{SO}_4) = \text{Na}_2\text{SO}_4 + \text{MnSO}_4 + 2(\text{H}_2\text{O}) + \text{I}_2]$ and the purple vapours (sp. grav. = 8.716) of Iodine are condensed as dark-grey scales (sp. grav. = 4.95) of a metallic lustre, much resembling black lead and melting at 170°F .

(475). On contact with sulphuretted hydrogen in the presence of water, iodine precipitates the sulphur while it combines with the liberated hydrogen to form hydriodic acid in solution $[\text{I}_2 + (\text{SH}_2 + \text{Aq}) = \text{S} + 2(\text{HI} + \text{Aq})]$ but the oxygen of the air again decomposes this solution $[2(\text{HI}) + \text{O} = \text{H}_2\text{O} + \text{I}_2]$ and combining with the hydrogen to form water liberates the iodine which forthwith dissolves in the water to which it imparts a reddish color.

(476). When iodine acts upon ammonia it does not liberate the nitrogen but simply removes two-thirds of the hydrogen, in whose place it substitutes itself $[\text{NH}_3 + \text{I}_2 = \text{NHI}_2 + 2(\text{HI})]$ while at the same time other portions of the Iodine combine with the liberated hydrogen to form hydriodic acid.

(477). It has a stronger affinity for oxygen than has bromine or chlorine and nitric acid (HNO_3) which has little or no influence on those gases, readily oxidises it into Iodic acid $[\text{I}_2 + 10(\text{HNO}_3) = 6(\text{HIO}_3) + 2(\text{H}_2\text{O}) + 10(\text{NO})]$; but its affinity for all the other elements being

weaker; bromine and chlorine easily displace iodine from its non-azotized compounds, whereas, it (iodine) displaces them (bromine and chlorine) from their oxygenised combinations.

(478). Like bromine and chlorine, iodine can act as an oxidiser which may be applied directly to organic molecules; but unless the hydriodic acid be saturated, as it is formed, it does not occasion phenomena of substitution (as does iodine with organic bases) and the products of iodized substitution are generally prepared by indirect methods.

(479). Iodine dissolves freely in alcohol and ether; but very sparingly in water, with the last it forms a light-brown solution which is slowly decomposed and the iodine combines with the hydrogen.

(480). When thrown on a red hot shovel, iodine is rapidly diffused as a powerful deodorant vapor which decomposes sulphuretted hydrogen, arrests putrefaction, and destroys putrid emanations, but its easy condensation and the ugly manner in which it disfigures clothing render it less useful than chlorine than which it is infinitely more difficult to properly diffuse.

(481). Iodine may also conveniently be suspended from the ceiling in gauze-flannel bags, or its saturated aqueous solution may be dispensed as a spray to greatly add to the comfort of the patients and to the sanitary improvements of wards where variola cases are lying or where sloughing or profuse suppuration is going on.

A MIRROR OF PRACTICE.

POST-DIPHTHERITIC PARALYSIS, ILLUSTRATED BY TWO CASES.

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THE cases of post-diphtheritic paralysis that have been recorded in India, if gauged by the literature extant, are sufficiently few to merit the publication of those coming under the observation of practitioners in various parts of this Empire. It is well known that diphtheria occurs so much more frequently in urban than in rural districts, as to justify our believing it to be a town disease, this statement is even truer of India than it is of England and European countries generally. During a period of 14 years in mofussil India, I have altogether only met with eleven cases of diphtheria, and in only one of these did it occur in a member of the indigenous community—a Mahomedan male child of three years—who recovered after passing through (1) an attack of severe post-diphtheritic aphonia lasting 7 weeks from partial paralysis of the constrictors of the pharynx (3) albuminuria, (4) diabetes insipidus, (5) broncho-pneumonia, lasting two months, during which he suffered seven times from attacks of convulsions under ordinary circumstances. When met with, however, the disease is as characteristic in this country as it is in England, and the sequelae are as frequent and as severe, especially when the disease occurs in the cold weather.

Of the other ten cases, two were in European male adults; seven in Eurasians, (one man, one woman, two boys and three girls); and one in a Mahomedan boy. Of these ten cases, in four we had grave complications—two with diphtheritic paralysis, one with acute croupous pneumonia, one with cardiac syncope, complicated with simple acute endocarditis.

As regards the frequency and destitution of diphtheria, it cannot be alleged that mine is an exceptional experience, for the reason that during the last eight years I have inquired of at least fifty medical men as regards their Indian experience of diphtheria, and the invariable reply is that they have never met with more than a few cases. The conclusion one arrives at is that diphtheria in the mofussil of India must certainly be rare.

In Calcutta, Madras, and Bombay, this disease is only too frequently met with, and the reason for the difference in prevalence in town or city and country places is doubtless the same as gives rise to the same difference in Europe. The extreme rarity of its occurrence amongst the inhabitants of this country, however, is a matter deserving of a moment's reflection, and the interest attaching to it is enhanced by considering the fact that true enteric fever is also a comparatively rare malady amongst them. Both are specific diseases, both attack a part of the digestive tract (principally), and curiously enough the disease in both cases has its chief seat in the mucous membrane and adjacent lymphatic tissue and lymphatic glands. Enteric in the agminate and solitary glands, and diphtheria in the tonsils and other glands, the structure which bears the brunt of both diseases is therefore adenoid or lymphatic tissue; in diphtheria, that of the tonsils and the pharyngeal lymphatic glands, or the continuous membrane of lymphatic tissue which occupies this region.

These are a few stray thoughts, which crossed one's mind, whilst considering the facts connected with the following two cases of post-diphtheritic paralysis, which were followed by localised paralysis.

The first case was that of an Eurasian girl, *et.* 10 years, who was attacked with an acute inflammation of the throat on the evening of the 25th September 1893, but was not seen by me until the morning of the 27th, when the disease was diagnosed as acute tonsillitis supervening on chronically hypertrophied and indurated tonsils. On the morning of the 28th, however, the false membrane with its greyish color and leathery character had appeared, and the urine was found to be loaded with albumen. She now also suffered from aphonia, hurried breathing, a quick full pulse, and a temperature of 102.5°F. Constipation, a thickly furred tongue and a constant dry cough, although the lung sounds were clear and normal. There was nothing peculiar about the case, so far as the early stage was concerned, nor even in the course of the stage, except that she remained unusually long in bed, was intensely weak, and fainted twice from cardiac debility. For a period of 14 days, after all signs of the throat affection had disappeared, she was not even able to sit up in bed. On the 18th day after the fever left, she was propped up with pillows, and in a week was able to sit up for about half an hour at a time. On the 24th day after the subsidence of the pyrexial symptoms, she was permitted to sit

on a comfortable couch, which was placed adjacent to her bed. When she tried to get on to the couch from the bed she found that she was quite unable to stand, but not suspecting her infirmity, fell to the ground. We then inquired carefully as to the state of the various groups of muscles, and found that in several regions there was complete paralysis, whilst in others there was only paresis.

We first examined the eyes and found both pupils markedly and permanently dilated, whilst she was unable to distinguish any one member of her family, although she could recognise her mother and two (out of four) of her aunts when they stood at the door six yards off, but they always appeared double. She could not read even large print, and found any light very disagreeable. Consequently she could not tolerate an ophthalmoscopic examination. At rest there was an inward squint in both eyes, but after a week this became very much more marked in the left. The axes of both eyes were displaced inwards and downwards. This state lasted for 9½ months and left her permanently myopic.

Next we found her hearing very defective. At first we put this down to the quinine she was taking (9 grains a day); because of ague which she had suffered from for 8 months, and an enlarged spleen, which reached the crest of the ilium below and the inner border of the right rectus abdominis, and upwards to the 7th rib. Stopping the quinine however, did not remove the deafness, which gradually disappeared *per se*, and by the end of the 8th week left her completely.

The aphonia was of a peculiar kind. We could sometimes hear her; but, as a rule, could not distinguish what she said.

We next found that the erector spinae were very weak on both sides but not paralysed, whilst the whole of the external rotators of the thigh and the muscles of the anterior tibial region were paralysed on both sides, but especially on the right. The pectorales major and minor, and the serrator magnus appeared also to be weak. The last-named condition caused great dyspnoea. The deltoid muscles and the triceps supplied by the posterior interosseous nerve were paralysed.

Up to the 11th week after the paralytic symptoms began, her condition was one of interrupted retrogression presenting the appearance of a patient who was in the last stage of general complication with bulbar paralysis. She could neither speak nor make her wants known, as she had previously done, by signs or in writing. There was difficulty of swallowing, especially of solids, and even liquids could only be drunk in small quantities at a time. When more than a dessertspoonful, say about an ounce, was drunk, she would suffer the greatest possible distress in which dyspnoea predominated; part of the fluid would enter the larynx, and set up violent coughing, part of it would return through the nose and give rise to great pain and violent sneezing; the face would become blue in color, the pulse thready, and the first sound at the apex of the heart inaudible. She now passed her motions involuntarily, and there was incontinence of urine—in short, she appeared to be a helpless cripple, hopelessly paralysed. Together with the paralysed state of the muscles, they had diminished in size, and lost all their reaction to galvanic and faradic electricity.

Yet curiously enough, when during eating or drinking, these terribly distressing symptoms had attained their maximum of severity, and the patient appeared to be, on the point of asphyxiating, she would suddenly appear to be relieved and in two minutes would be ready for another potation, and indeed would shew signs of great eagerness to be supplied with more, as the longer she went on drinking, the less became the distress. This would occur once or twice only during a meal. When she had become so bad that we thought it impossible for life to continue in that condition, she began to rally in a most surprising way. The first groups of muscles to recover were those of articulation and deglutition. This was very fortunate; for it enabled her to express her wants and swallow her food, which obviated the disgusting process of rectal feeding, which we had carried on for four weeks. Next the muscles of her legs and trunk began to recover, and lastly those of her arms.

The abnormal movements of the eyes continued for 5½ months, whilst the dilatation of the pupils, together with indistinct vision, remained for nearly ten months. This was a specially distressing symptom in a girl who was very studious. We got her a pair of spectacles, + 4 Dph., yet they assisted her but little. By accident one day, she took up her father's glasses and placed them over her eyes and found that she could read the smallest print with the combined lenses. Her father's lenses were + 2.5 Dph.—the problem was solved. We got her a pair of spectacle lenses of + 6.5 Dspherical, to go about and to read. Here again our aid came rather late, for a fortnight after using the lenses, vision began to return, and from being hypermetropic, she became myopic to the extent of 1.5 Dph., and has remained so.

It is now 1½ years since the girl suffered from diphtheria, and it may be said that since that time she has never had one day's good health. She is always ailing one way or another—chiefly, however, with dyspeptic symptoms and palpitation.

The second case lacks much of the interest attaching to the first, but it has its interesting points also, especially those connected with the eye. Anthony C., *et.* 12 years, Eurasian, who had previously been in good health, but was thought by the parents to be getting thin for some months before the attack. Three weeks after a mild attack of diphtheria, which began on the 13th June 1891, and ended on the 19th, he suffered from double vision, and a high-pitched tone of the voice, whilst the legs would suddenly give way when walking, causing him to be precipitated to the ground. The symptoms progressed till he could only see with the left eye, the pupil of which was normal. Eventually complete dilatation and paralysis of accommodation set in. Four weeks from the day of the attack he had almost complete paraplegia, with all its usual symptoms.

At the end of the third month he had recovered his vision and voice, but had still to use crutches. These he left off about the eleventh month, and he is now, four years after his disease, a smart and active boy.

Both cases were treated in the same way: by strychnine, galvanic electricity, massage, rectal feeding, stimulants, iron, quinine and cod liver oil. As the fact of the paralytic symptoms is the main reason for this contribution, we have confined our remarks specially to it.

FOUR CASES OF PORRO'S OPERATION AT THE LADY KINNAIRD MEMORIAL HOSPITAL, LUCKNOW.

By LILLIAN JENKINS, L.B.C.P. & S., Edin.

Physician in Charge.

CASE I.—Lutchmin, Hindu, purdah woman, age about 26.
Previous history.—First child born in 1885 with difficulty. Fine, healthy child. Still living.

Three years afterwards, second child was delivered by high forceps. There was at the time evident contraction of the pelvis, but of no high degree. After this, *osteomalachia* advanced rapidly. A year after her second confinement, the patient presented herself at the K. M. Hospital. She was walking with her back bent to almost a right angle. The internal conjugate diameter of the pelvis barely admitted two fingers. The disease seemed, for the time being, quiescent.

The patient attended the dispensary for attacks of pain in her thighs and back at intervals from this time on. In 1890 abortion was induced at an early period, but when in 1891 the patient again became pregnant, a repetition of this treatment was refused, and on 6th February 1892, Porro's operation was performed.

The operation presented no special features, beyond the accidental tearing of the right broad ligament, from which there was profuse venous bleeding. The tear had to be secured by stitches which afterwards sloughed out and retarded convalescence.

The pedicle was secured by an elastic ligature and transfixed by knitting needles and drawn down to the lower angle of the wound. The wound was closed by silk sutures, and the whole dressed with iodoform and salicylic wool.

The patient recovered perfectly within a month, and her child thrived well.

CASE II.—Jaldu, Hindu, aged 27.

Previous history.—First child born three years ago without difficulty, very fine looking boy, after her confinement patient suffered from pains in her thighs, debility and general 'malaise' ('garni'). The pains got better in time, but her difficulty of walking increased.

Present condition.—Very small, slightly made woman. Pelvis slightly contracted. Internal conjugate barely admits one finger. Os fully dilated. Membranes ruptured. Said to have been in labor three days. No attempts at fixation of foetal head. Pulse 124. Temperature 102.4°F. Signs of great exhaustion. Patient's friends consented to radical operation, and she was at once anaesthetised.

Incision made in median line about 8 in long. Peritoneum divided on director. Uterine wall presented and was divided by scalpel and transverse tearing. Child extracted by the feet with some difficulty. Showed signs of asphyxia but quickly recovered. Uterus then drawn out of wound and placenta removed. An elastic ligature was then passed round the cervix and secured. The uterus and appendages were removed by cutting through the cervical tissue $\frac{1}{2}$ inch above this ligature. The stump was now further secured by a stout ligature and transfixed by knitting needles at the lower angle of the wound. It was carefully dried and the peritoneum sewn over it. The wound was closed by (1) continuous peritoneal suture; (2) interrupted suture through muscular walls and skin.

Dressings. Iodoform, protective, mercury wool, and many-tailed bandage.

Progress of Case.—Patient made an uninterrupted recovery. Temperature never rose to 100°F. after the operation. Pedicle separated at the end of a fortnight and convalescence was complete in three weeks.

CASE III.—Rukmin, Native Christian, age 25, primipara. Case of extreme pelvic deformity, dating from early childhood and due to acute rickets in all probability. Patient walks with her spine bent at a right angle, and in standing or walking, aids herself by placing the hands upon her knees.

Internal conjugate diameter of pelvis admits two fingers with difficulty. Married 25th March 1894. No subsequent menstruation.

On 27th December 1894, admitted into hospital with labor pains. Os partially dilated, membranes intact. Operation performed under CHCl₃. The mechanical difficulty of the operation was considerable owing to the extreme deformity, otherwise it presented no special features of interest. The child showed signs of vitality immediately on removal. Steps of operation as in previous cases.

Progress of case. Was uninterruptedly satisfactory. Dressing changed every 2nd or 3rd day; abdominal wound healed by first intention. Stumps separated 15th day. There was a small fistula communicating with the cervical canal on separation of the stumps, which gave no trouble and closed before patient was ready to sit up. Convalescence established at end of 21 days. Patient discharged with her child, a week later.

CASE IV.—Parbati, aged 35, Hindu.

Previous history.—Married 22 years, no trouble with her early confinements, of which there were several. Does not give any history of illness resembling osteomalachia, but describes a very difficult labor which took place five years ago, when the native midwife used great force and the child was born dead.

Patient first admitted into K. M. Hospital at the end of 1892. She was then in labor and considerable pelvic deformity was discovered. Turning was performed with perforation of the after-coming head.

On 28th January 1894 patient was again admitted into hospital. The membranes had ruptured and the small diameter of the head engaged. Craniotomy was performed and the patient made a good recovery. On 25th January 1895 patient was admitted for the third time under similar conditions. The os was fully dilated and the membranes ruptured during the first pain after admission: The patient's friends consented to a radical operation which was at once undertaken.

NB.—The internal conjugate admitted two fingers with difficulty.

Operation.—Incision median line 7½ inches long. Peritoneum slit up on director. Uterine wall incised in line of wound and torn transversely. Child extracted by head. No asphyxia. Placenta removed and uterus drawn out of wound; secured with elastic ligature and transfixed with knitting needles. Pedicle cut off short above these. Peritoneum sewn over stump, which was well dried and dusted with iodoform. Wound closed as in previous cases, and the whole dressed with iodoform and mercury wool.

Progress of case.—Uninterruptedly satisfactory. Temperature never rose above 99°. Stumps separated 15th day. Wound healed by first intention. Patient left the hospital with her child at the end of a month.

**POST-MORTEM NOTES OF A CASE OF
CARDIAC RUPTURE.**

By Asst. Surgeon. J. J. SRINIVASAGAM PILLAY,
B.A., L.R.C.P. & S.E.

Assistant to the District Medical and San'y. Officer, Malabar.

On Saturday, 26th May 1895, at 4 P.M., I examined the body of a fairly nourished Hindu male, aged 35 years, who had come by his death under the following circumstances:—While driving a heavily laden bullock cart, the bullocks suddenly became unruly and dragged him off his seat. He came down heavily on his back, and one of the wheels of the cart passed across his chest from right to left. Death was instantaneous. A *post-mortem* examination was held three hours after death.

External appearances.—Body cold. Rigor mortis just commencing in the extremities. Eyes closed. Blood had flowed from the nose and mouth. The following abrasions and bruises were found on the body:—(1) Slight abrasion behind the left elbow joint. (2) Slight abrasion on the outer aspect of the left knee joint. (3) Abrasions on the posterior and outer aspects of the right elbow joint. (4) Abrasion with ecchymosis about the middle of the back which runs obliquely upwards from right to left. It is well marked towards the right side, where it is about 3 inches broad. (5) Abrasion with ecchymosis running obliquely from the right shoulder joint to about the middle of the left side. It is irregular and broad, extending in front from the sterno-clavicular articulation to the pit of the stomach, and on the left side, from a little below the axilla down to the 9th rib.

Internal appearances.—On opening the thorax the lungs presented a congested appearance from extravasation of blood into their tissues. On gently separating the lungs, the heart was found to be ruptured—the rupture extending on the right from above the entrance of the *superior vena cava* obliquely to the left side, and almost severing the pulmonary artery and aorta at their origin. The *superior vena cava* and the left auricle are also torn. The cavities of the heart are empty. In the left pleural cavity there is about 30 ounces of fluid blood and in the right about 12 ounces.

Lungs.—There are patches of congestion and extravasation in different parts of the lungs—these being most marked towards the bases. There is a lacerated wound in the lower lobe of the right lung posteriorly, which corresponds to a fracture at the angles of the 7th and 8th ribs.

There is no injury to any of the other bones.

Abdomen.—Liver and spleen slightly congested, but healthy; stomach contains partially digested food but is otherwise healthy; kidneys and other organs are normal. Brain rather anæmic. Opinion as to cause of death: *Immediate cause* rupture of the heart.

**THIRTEEN CASES OF HEREDITARY ATAXIA IN A
SINGLE FAMILY.**

NEFF has reported thirteen cases of ataxia in adults in four generations of one family, with a distinct hereditary history. All of the cases were characterised by a marked similarity of the symptoms. In all of the cases but two the onset was observed between the ages of fifty and sixty-five, and of these two the first symptom was noted in the one at the age of sixty-two, and in the other at the age of sixty-eight. In four of the cases insanity also developed, assuming the form of dementia, and differing in degree and corresponding to the dementia resulting from organic brain-disease.—*American Journal of Insanity.*

OUR PICTURE GALLERY.

**BRIGADE-SURGEON LIEUTENANT-COLONEL
JOHN MARTIN COATES, M.D., F.C.U.**

THE news of the sudden death of PROFESSOR J. M. COATES will be received with universal regret throughout Bengal and other parts of India. For nearly forty years he served in various appointments and in almost all the large stations in lower Bengal.

DR. COATES was born in County Down, Ireland, on the 6th of July 1832. His father's family came originally from Yorkshire, and had been settled in Ireland for several generations. He received his preliminary education, and also his medical training in Belfast. He graduated in the Queen's University, Ireland, competed successfully for the H. E. I. Co.'s Medical Service, and obtained his commission as an Assistant Surgeon on the 4th August 1855.

He landed in India in March 1856, and spent the first few months of his service in Baraich, in Oudh. Towards the end of that year he was offered an appointment in a regiment at one of the favorite stations up-country, but before joining, a brother officer who had been posted to the 1st Military Police Battalion, afterwards known as RATTRAY'S Sikhs, asked him to exchange, as he had friends up-country. COATES consented, having, as he used to say in relating the circumstances, no friends in India, and being indifferent as to where he was posted. The exchange turned out to be a fortunate one for him, as in the following year, when the mutiny broke out, the regiment to which he would have been posted, joined the mutineers and the surgeon was among those massacred. Throughout the mutiny DR. COATES served with RATTRAY'S Sikhs, and was present at the relief of Oudh, and the subsequent operations in putting down the rebellion in Behar and Gya. The following incident, which took place during the pursuit of the Koer Sahib, is characteristic of the man. The troops came up with the mutineers who were occupying the famous old fort of Rotasgarh, near Sasaram, and encamped before it. Having seen to his patients, DR. COATES took a book and went for a stroll; becoming engrossed with his reading, he wandered from the camp, and being suddenly startled by two bullets whistling past, awoke to the fact that he was close to the walls of the fort. He turned back, but finding to his surprise that no more shots followed, determined to explore further and discovered the last of the rebels leaving through the opposite gate of the fort.

During his recent visit to Gya, it was a great pleasure to him to go over the ground familiar in the days of the mutiny, and to point out the sites of the fights and skirmishes of 1857-58.

After the mutiny, he was appointed Civil Surgeon of the newly-formed district of Champaran, and while there, he made valuable observations on leprosy, distinguishing the different varieties of the disease. He also contributed a very interesting report on this subject in connection with the enquiry instituted by the Royal College of Physicians, of London.

He did a great deal of surgery at Champaran and was a very successful operator. A few years ago, he shewed a box full of vesical calculi which he had removed while in that station. He was very popular among the planting community, and to this day the older residents speak of his many acts of kindness. It is told of him that he rode 128 miles in one day to obtain the services of a clergyman for one of his dying patients. From Champaran he was transferred to Cuttack, Hazaribagh and Moorshidabad, remaining a few years in each. In 1873 he was appointed joint-Civil Surgeon of Simla; which post he gave up in the following year, on being offered the Sanitary Commissionership of Bengal. While holding the latter appointment, he repeatedly travelled over the whole of the province on inspection duty—a remarkable feat in those days of scant railways and bad roads. DR. COATES was noted for the rapidity with which he managed to get over the country. He travelled with the lightest of gear, and was content to put up with the barest necessities. In his reports he laid special stress on the importance of improving the supply of drinking water, and on the necessity of special precautions being taken against the fouling of wells and tanks used for drinking purposes.

From 1866 to 1871 the late DR. COATES was superintendent of the jail at Hazaribagh, and during these years no man could have done more for the comfort and reformation of the unfortunate men under his charge, than he did. He appeared to have accepted the lines of Burns as his motto for jail discipline—

"Even you, ye hapless crew, I pity you;
Ye whom the seeming good think sin to pity
Ye poor, despised, abandoned vagabonds
Whom vice has turned o'er to ruin."

At the same time, in all reformatory discipline DR. COATES was strict, albeit just. But the nature of the man induced him to consider reformation a higher duty than punishment. Says a writer:—If I were to mention one-tenth of the good he did during these years, I should fill pages. In those days the present Reformatory School in Hazaribagh was a penitentiary for European prisoners, and there were from 80 to 100 persons confined in it when DR. COATES took charge. It was then anything but a Reformatory, and it would have carried off the palm as one of the most demoralising institutions in India, though there was no lack of punishment. These punishments had culminated in two suicides and an outbreak amongst the European prisoners that nearly ended in the murder of the superintendent and jailor. An investigation was held, and both the superintendent and jailor were removed. DR. COATES was appointed to take the place of the former and he soon shewed that he was both a reformer, and a leader of men. The first thing he set about was a classification of prisoners, and the provision of some rational mode of employment for them, instead of the demoralising one of digging holes to-day, to be filled up to-morrow. At that time there was a large number of men in the jail—soldiers and sailors who could neither read nor write. For these DR. COATES opened a school, selecting a schoolmaster from among the educated prisoners. But as our paternal Christian Government had not made any provisions in their jail budget for such an institution

as a school, DR. COATES had to spend his own money in order to provide reading books, copy books, slates, etc. But that he did not grudge, and the jail school soon became a reforming and flourishing institution. He next determined to form a library. There was not such a thing as a Bible or a Prayer Book in the jail at this time, but DR. COATES soon had every man supplied with a Bible, Church Service, and Hymn Book; and for days, when not otherwise employed, he would be riding round the station on his old horse "Bob," soliciting contributions of books for his jail library. He also wrote to friends and acquaintances, far and near, asking them to collect books, and send them by bullock train parcel to him, the freight for which he mostly paid himself. He even laid SIR WILLIAM GREY, then Lieutenant Governor of Bengal, under contribution for a donation of books for the prison library. Whilst doing this, he laid out the grounds in each ward of the prison into beautiful gardens for the cultivation of fruit trees and vegetables; in this also he largely spent his own money for plants and seeds. In less than twelve months, crime was almost unknown in the prison. Every Sunday DR. COATES saw the prisoners paraded for Divine Service, which he always attended himself, after having first arranged for places for both Protestants and Roman Catholics to hold such services. He also established a voluntary Sunday afternoon school, which was usually well attended. The doctor used to mark out the lessons himself, and to write out short but pithy commentaries on the lessons, when he could not attend the school himself. His next great anxiety was to find employment for discharged prisoners who were neither soldiers nor sailors, and many an unfortunate man has to thank the good doctor for assisting him to a fresh start in life.

"But DR. COATES' good work suddenly came to an end in 1871. When SIR GEORGE CAMPBELL succeeded SIR WILLIAM GREY as Lieutenant-Governor of Bengal, he paid his first official visit to Hazaribagh in the autumn of 1871, and in due course inspected the European Penitentiary. In going round with DR. COATES, who, with a just pride, was shewing all his reformatory arrangements, SIR GEORGE CAMPBELL turned round like a hyena, and snarled out, "I did not come here to see a hotel! I came to see a place of punishment, and of that I have seen none." That night the decrees went forth that the jail gardens were to be rooted up. "Fruit trees inside a jail! What next?" said SIR GEORGE. The school was at once closed, the library broken up, and the books sold. "Who passed the bills for such an assortment of books?" DR. COATES tried to protest, and pointed out that the books had not cost the State one pie, and that all that he had done for the prisoners had received the sanction and support of SIR WILLIAM GREY and DR. MOUAT, who had just retired from the position of Inspector-General of Prisons. DR. COATES even pointed out that one of the books, which SIR GEORGE CAMPBELL objected to, bore an inscription to the effect that it had been presented by SIR WILLIAM GREY to the Hazaribagh Jail Library. But, as the missionary who writes the reports of the Bethel Mission at Jaintara would say, "the devil was in power, and chuckling in his sleeve" behind SIR GEORGE CAMPBELL, who snarled back at DR. COATES: "Convicts are sent to jail for punishment, not to



Yours Truly
J. M. Bates

be stuffed with Mark Twainism"—the book objected to being one of Mark Twain's productions. The result was that, rather than carry out SIR GEORGE CAMPBELL'S drastic system of jail discipline, DR. COATES resigned his appointment as superintendent of the Hazaribagh Jail, at much pecuniary loss to himself, and went as civil surgeon to Berhampore. SIR GEORGE CAMPBELL had little difficulty in finding a jail superintendent according to his own heart, and good DR. COATES took leave of his prisoners with tears in his eyes, when handing over charge. The European penitentiary of Hazaribagh once more became a hotbed of demoralisation, and before twelve months had elapsed, among about eighty prisoners, mostly young men of good physique, there were six deaths, two of which were suicidal, two desperate attempts at suicide, and one attempt at murder for which a man was tried in the Calcutta High Court. So much for Europeans. The floggings in the native jails became so numerous that the total lashes in one jail averaged fifty for every prisoner confined in it, and the death-rate became so high that even SIR GEORGE CAMPBELL himself became afraid of consequences, and tried to throw the blame on the jail superintendents, some of whom retaliated by threatening to publish his own written instructions. This however is not a history of SIR GEORGE CAMPBELL'S jail mal-administration, but a chapter from the life of the late Brigade-Surgeon J. M. COATES."

In 1877 he officiated as Principal and First Physician, and Professor of Medicine to the Calcutta Medical College and Hospital, and in 1880 he was appointed substantively and continued in this appointment until he retired in 1890. During his principalship many important changes were made in the College and in the Hospital. He was a warm advocate of female medical education, and took a large and active part in establishing the female class at the Medical College. His interest in the members of the female class continued long after they had left the College, and he was ever ready to assist them with his advice and purse.

In the Hospital many important improvements were carried out, the Eden and Ezra Hospitals were built, and the system of nursing greatly improved under his régime. During the time he was Principal, he had a very large consulting practice, and his opinion was greatly valued by all, especially in Indian households.

Fourteen years of a connection with the Medical College brought DR. COATES into intimate relationship with almost every independent physician in the city. He will long be remembered by his non-official brethren as one of the most painstaking, practical and level-headed consultants, while his hearty and congenial manner made it a positive pleasure to have professional intercourse with him. Unlike the majority of his official cloth, he saw no social distinction between the official and the non-official, and his presence as a congenial visitor in the home of many a private practitioner, gave him a warm place in the hearts of them all.

To the local profession his death is a very personal loss, and the presence of so many hard-worked private practitioners, both European and Indian, to pay their last respects to his memory at his open grave, was a touching evidence of the esteem and affection in which DR. COATES was held by them.

His long tenure of office as chief physician to the Medical College Hospital brought him in contact with the poor and stricken. Towards these suffering ones the genuine magnanimous sympathy so characteristic of the man, was evinced in all its sweetness. He was essentially the poor man's friend. Those who knew him best and saw countless instances of that quiet unassuming charity which keeps secret the doings of a heart full of humanity, might record volumes of his benefactions to the indigent and helpless when they were leaving his kindly care from the wards of the hospital. How many a poverty-stricken home in this city mourns the absence of this great philanthropist. How many such homes will now recall the smiling encouraging countenance that brought sunshine and hope by the return of fees and by his refusal to receive remuneration for his services when he knew the acceptance of a well-earned fee would mean discomfort and perhaps starvation to those who offered it.

As a teacher DR. COATES was thoroughly practical. He was no orator, and his utterances in the hospital clinic were crudely to the point and very often humorous in their peculiar applicability. He was loved by his students, who were all "his boys," and his interest in their welfare was not of a passing character; for his influence and help were always at the disposal of his students, even after they had left the portals of the College.

DR. COATES had a wide reputation of being a very skillful physician, possessing great knowledge of the diseases of this country. It is much to be regretted that he did not record his experiences—a want of leisure preventing his doing so.

During his services in Bengal, he received the thanks of Government on four occasions: the first time was in 1867 for services rendered during the Orissa famine; the second in 1875, for services during the Behar famine; the third for services rendered during the cyclone of Noakholly and Chittagong in 1877, and lastly in 1879 for his work in the Committee on Medical Expenditure.

In 1885 he was employed as President of a Committee of Enquiry into the sanitary aspects of the Kidderpore Docks and the neighbourhood of Tolly's Nulla.

In 1886 he was offered promotion to the administrative ranks, but being greatly interested in his work, and having many ties in Calcutta, he preferred to remain Principal of the Medical College to the end of his service. After his retirement in 1890 he travelled in Cashmere, where his services were availed of by the Maharaja. Subsequently he accepted the post of Physician to the Maharaja of Durbunga, which he resigned last year and went home, visiting China, Japan and America on his way.

During his career in India he numbered among his patients many of the highest Indian families, and with all of them he was on terms of intimate friendship.

Having briefly noticed the principal events in the life of DR. J. M. COATES, we may conclude with an extract from a letter by an Indian friend who knew him intimately: "He was one of those sincere friends of the natives of this country whose sad loss will be mourned by a wide circle of his admiring friends. It will be very difficult in these hard times to replace him. His kind and benevolent disposition, his deep religious conviction, his ever cheerful temper, his ready humour and wit, will long be remembered and appreciated by his many friends and acquaintances."

THE Indian Medical Record.

1st August, 1895.

SIR WILLIAM ROBERTS, MD., F.R.S., ON THE
GENERAL FEATURES AND THE MEDICAL
ASPECTS OF THE OPIUM HABIT IN
INDIA AND THE RECKLESSNESS
OF THE EVIDENCE ON WHICH
HIS CONCLUSIONS ARE
BASED.

II.

THERE is yet one feature of the relation of the opium habit to malaria in Bengal which we must not overlook, before proceeding to consider the remaining sections of the memorandum, by the medical expert with the Royal Commission on opium, *viz.*, the relation which age bears to malaria and the opium habit.

Apart from the habit of giving opium to infants—which is quite unknown in rural Bengal, there is a consensus of opinion that opium-eating is usually begun about middle life—40 to 45 years of age. SIR WILLIAM ROBERTS says: "The opium habit is mainly a habit of middle life and advancing years, and Dr. CROMBIE even admits the same, when questioned by MR. FINSHAW—

Question: "You state that the opium-eating habit is a habit which is taken up in advanced life—this remark applies to Eastern Bengal?"

Answer: Yes, to Eastern Bengal, and Calcutta."

If we examine the statistics of any dispensary relating to out-door malarial fever patients who come to our dispensaries for relief, in any of the malarial districts of Bengal, we find that the incidence of malarial fevers falls most severely on the ages of infancy and childhood—from 1 to 12 years of age; childhood being the period of greatest mortality, as it is the period of least resistance to the malarial poison.

In malarial Bengal, therefore, one would expect that if the prophylactic properties of opium were known at all to the people, it would be found as a household remedy for childhood and youth, to arrest excessive mortality or mitigate the untold suffering and misery inseparable from the malarial environment. Instead of this, we find, as already stated, that the habit is unknown among children, and as Dr. CROMBIE admits, is mainly a habit of "advanced life," presumably begun by those whose constitutional fitness and social comforts have enabled them to survive the fatal periods of childhood and youth. Even if we could grant that the habit is common among middle-aged ryots—which it is not—an opium-eating parent, finding the drug beneficial to himself, would surely not withhold it from his suffering offspring—to do so would be "a wanton cruelty!" indeed, but we neither find the parents nor the children of the poor ryots of Eastern Bengal using the drug for any such purpose.

We must apologise to local medical men in Bengal for being obliged "to slay the slain" and to drive this silly phantom of "opium as a prophylactic" into the congenial atmosphere of fiction from whence it at first emerged:

lest otherwise those who are unacquainted with Bengal might believe that there was some truth in the statement so diligently put forward by official witnesses that opium was used as a prophylactic against malaria by the ryots of Bengal. We thus see that the malarial theory as the cause of the opium habit, utterly breaks down in the most malarious province in India—when brought to the test of ascertained facts and figures available to any medical man who knows Bengal and the Bengal ryot.

III. *The practice of giving opium to infants.*—This is undoubtedly the saddest and most painful feature of the whole subject of opium-eating in India. The callous indifference and seeming lightness of heart with which this cruel and barbarous custom is treated by the medical expert, afford food for reflection to every lover of species. He says: "In Bombay children's pills or 'balagolia' are extensively sold for this purpose. These pills are now manufactured in order to insure purity and constancy of strength, and contain respectively, one-sixth and one-third of a grain of opium each, mixed with a variety of harmless spices." "The practice is an ancient one, and prevails extensively all over India, but especially in the North-West Provinces, in the Native States of Rajputana and Malwa, and in the Bombay Presidency." That the practice is *not* prevalent "all over India" we have already shewn, for in the malarial swamps of Lower and Eastern Bengal the habit is unknown. Not only does SIR WILLIAM ROBERTS advocate non-interference in this criminal practice, but he tacitly acquiesces in the custom as "harmless" and "sometimes beneficial." But he is not the only one who approves of this mode of increasing infant mortality: even the parental Government of Bombay itself—(supported, we are ashamed to add by the approving certificate of Surgeon-Major PARKER who reports "that though the practice of using opium pills to quiet children may be open to objection, it is inseparable from native habits and customs," and that the pills are "comparatively harmless") has undertaken the manufacture of those pills under the supervision of the licensed vendor! The habit seems to cling almost exclusively to the inhabitants of past or present opium-growing centres, and adjacent cities, where illicit opium can, or could at one time be easily obtained. The responsibility for the introduction and fostering of this cruel habit with all its ghastly train of infantile suffering must be laid at the door of those who permit and foster opium cultivation in India. We need not go into details to prove that the practice is fraught with the most disastrous consequences to infant-life leading to marasmus, disease and death. SIR WILLIAM ROBERTS, as a physician, knows full well that "in childhood the brain is proportionally larger than in adult life, hence the effect of opium is greater than in adults, and children bear it (opium) very badly: consequently, smaller doses must be given than are proportionate to their ages. Care is necessary from the age of 6 months to 1 year, as one minute has produced fatal results" (BENTON). He himself tells us that another tendency of opium consumers is to grow "unduly thin," or in more forcible medical language, to become emaciated by arrest of nutrition. "All the secretions of the body, except those of urine and sweat, are lessened by opium" (BENTON). Here then we have two universally admitted properties of opium: (a) its more powerful action and greater danger in

infant life ; and (b) its general arrest of nutrition, even in adult life, much more so in infant life. With the knowledge of these facts before him, the medical expert writes of this criminal practice approvingly as follows : " Indian mothers and nurses, and the native public generally, have an unquestioning faith in the wholesomeness of giving opium to children, and the accumulated experience of successive generations of parents extending over hundreds of years, furnishes a body of presumptive evidence which is not to be lightly set aside on the ground of *a priori* considerations." He thinks it is " not on the whole injurious to any appreciable extent."

The above argument might have some soundness were it applied to intelligent mothers educated and trained in morality and in the sacredness of family life ; but utterly inapplicable to the condition of the poor, ignorant, custom and caste-bound mother, who neither knows the dangers of the drug, nor the guilt of mishap to her infant ; or if she knows the danger disregards it, under pressure of want or the plea of dire necessity to maintain herself and her children. She must be free to work for food for their support, and her infant can only let her free by being kept daily, for long intervals, without food, under the influence of the drug.

It is the natural result of the conditions of this kind of infant life that the child should sooner or later, if not overdosed to death, present the pitiable picture we are familiar with, in regions where the habit prevails. The feeble attempt made by SIR WILLIAM ROBERTS to account for the atrophy of opium-drugged infants by quoting PROFESSOR HENNOT'S description of an atrophied child—from tuberculosis, syphilis, or general inanition—is not to the point. It was told, by one independent medical witness at least, that the atrophy of opium-eating infants disappeared when the drug was withheld—" the child recovered health and plumpness." It is only evading the point at issue to direct the reader's attention to a different condition—which only in rare instances simulates the atrophied opium-baby,—the real nature of which any competent medical witness would not fail to detect.

Even if we accept DR. ARNOTT'S opinion—on which so much reliance is placed in the report—we have enough to prove the deleterious effects of the drug on infant life, and the high mortality among infants, for which it is responsible. While endeavouring to shield the practice, he nevertheless says:—" But others, (opium-infants) ill-fed, ill-cured-for, are emaciated, and no doubt among these last there is a large mortality." We would ask any one, who knows the conditions of grinding poverty under which these poor mothers live, to consider the utter impossibility of her giving due attention to her infant, and supplying it with its full share of natural nourishment when she must keep it under the influence of opium in order to set her free to work for the rest of the family. Should fortune so favor her as to place her in a position of comfort, where she could afford nourishing food for her infant, of what use would it be to the child, if it has to struggle with the emaciating power of the drug, and only receive its food at long intervals when not under its influence? Under such conditions the opium-eating infant lives, moves, and has its being ; and we can expect nothing else than speedy marasmus and inanition to follow, until at length nature

yields, death relieves its sufferings, and puts an end to its poor troubled, tortured existence.

The excessively high mortality among opium-drugged infants is thus airily passed over in the medical memorandum:—"It was shewn that accidental poisoning sometimes attended the practice, children were occasionally brought to the dispensaries in a state of somnolence or coma from accidental over-dosing by a mother, or from a child getting hold of a lump of opium or a box of "bala-goli" pills left carelessly about and so poisoning itself.....Some of the medical witnesses expressed a doubt, whether fatalities from this cause were more frequent in India than occurred at home from opium given to children in the form of soothing syrups and cordials dispensed under medical prescriptions (!) DR. BLANEY, who was Coroner of Bombay for 17 years, could only recall five or six fatal cases of infants being accidentally poisoned in this way." The reason why the excessive death-rate among opium-eating children is not shewn in urban municipal or rural statistics is very simple. Let us describe a case which will serve as a type of hundreds of cases.

A coolie woman, the wife of a field laborer, gives her child an overdose of opium and the child dies. She feels guilty and afraid of the police. She must conceal the real cause of death from the authorities, lest she be put to great trouble and expense, and be subjected to endless worry by the police, who will extract her last pice from her, by keeping the terror of prison before her. What is she to do? She simply says her child died of fever, or bowel complaint, or some other common ailment and there is no more about it. In 99 cases out of the hundred, the opium-death statistics, even within Municipal limits, are never swelled by these cases. If the death occurs outside Municipal limits in rural tracts, no one asks and no one cares to know why the child died ; and no report ever reaches the thanah or police station—4 annas will protect her from that annoyance—the chowkidar or village watchman merely reports a death from some prevailing ailment, or more frequently takes no notice of it whatever. *It is a matter that calls for explanation why Sir William Roberts and his advisers, while knowing these facts, for they are known too well to every medical officer in India—should have palmed off on the non-professional members of the Royal Commission, and the British public, worthless and utterly misleading statistics of infant mortality from opium-eating in India.* To quote DR. BLANEY, 17 years coroner of Bombay as saying, "that he could only recall five or six fatal cases of infants being accidentally poisoned in this way," is audacious in the extreme, in the light of the above popular methods of recording opium-deaths. We can only account for it by the certain expectation that no medical officer in India would dare reveal the true state of affairs ; and that the British public were neither competent enough, nor sufficiently interested in the subject, to perceive the hollow and unreliable nature of the statistics referred to. "To European ideas," writes SIR WILLIAM ROBERTS, "the practice seems objectionable. The surroundings of child-life in India, are however so peculiar in relation to domestic circumstances, to food, climate and malarial influences, and as regards the exceptional tolerance for opium of

Indian infants that it would not be safe to judge the custom by European standards."

In the above extract there are two outstanding errors: (1) the habit is attributed to, or excused on the ground of malarious influences: (2) the writer assumes,—although repeatedly told to the contrary,—that Indian infants have "exceptional tolerance" for opium. As already stated, the habit of giving opium to infants is not known in the most malarious districts of India, *viz.*, Lower and Eastern Bengal, where children have the malarial taint from infancy. And that European children can bear opium as well, if not better, than native children is not a matter of opinion, but of actual experience. The theory of a "profound constitutional difference" or "exceptional tolerance" in the adult natives of India and their children is omnipresent in SIR WILLIAM ROBERTS' memorandum; but it finds no favor with two of the most influential medical witnesses put forward by the Indian Government. SIR WILLIAM MOORE,—an undaunted champion of the beneficial effects of opium on every other person's children except his own:—says "I do not think the constitutional difference has anything whatever to do with it," and SUGGON-MAJOR GENERAL RICE declares emphatically that "I have satisfied myself in my professional practice that Europeans are more tolerant—that is, require larger doses of opium, than natives bulk-for-bulk." These clear statements are in accord with the experience of medical science all over the world: there is absolutely no racial peculiarity distinguishing the natives of India as regards tolerance for opium, and although this fact entirely controverts SIR WILLIAM ROBERTS' theories, it remains still a fact, which any medical practitioner can test for himself. It is true that DR. CROMBIE, when asked the leading question.—"Do you think the people of India have a peculiar tolerance for opium?" replied "I have reason for believing that there is such tolerance." From what we have already learned of the careless inaccuracy of this witness, we may safely disregard his isolated statements on this subject, as conflicting with the experience of most, if not all, independent medical practitioners in India.

But when DR. CROMBIE was cross-examined on this point and asked:

Question: "Do you think that opium has less effect upon people here than in England?" he replies.

Answer: "I am not quite sure of that!"

Suicide—its relation to opium. There is no feature of the opium question in India which strikes a stranger,—who reads the daily press, so forcibly as the frequency of opium suicides in our large cities, especially Calcutta. The official and non-official witnesses before the Commission were unanimous in their testimonies regarding the excessive number of suicides that occurred by means of opium. But the medical expert with the Royal Commission on opium drops this unsavory subject with a passing notice of twenty lines of printed matter, and provides amusement for Indian readers by quoting provincial statistics, which are as worthless as they are inaccurate, for showing the prevalence of suicides by opium in India. He writes,—"Some of the witnesses expressed the opinion that the opium-habit in India was provocative of suicide." We expect scientific clearness and exactness of expression in a memorandum written by a medical expert with a Royal

Commission, and cannot therefore understand why the above sentence has been penned. We have read over most of the evidence,—carefully we confess,—of the most important medical witnesses who came before the Commission, but we are not aware that any one of them made the careless statement attributed to them in the above sentence. The statement (2605) quoted by SIR WILLIAM ROBERTS as giving expression to this view, says nothing about the "opium-habit." The quotation is as follows:—"One of the witnesses contended that opium 'is of all poisons the one which must be most attractive to a suicide. It presents death in its easiest and most delightful form to one who has reached that state of mind. I believe that its free sale does greatly encourage suicide.'" There is no mention here of the opium-habit in India" being "provocative of suicide." On the contrary, every witness who referred to this subject at all, stated clearly that the cheapness of opium and the facility with which it was procurable for criminal purposes were "provocative of suicide." Professor J. F. P. McCONNELL's (of the Calcutta Medical College) evidence is conclusive on this point:—

Question: "You say it is necessary (restriction of sale) to prevent the occurrence of suicide?"

Answer: "The number of cases of suicide by opium is very great," &c.

No one who knows the effect of opium on those who are addicted to the habit would expect that it would lead them to suicide. The opium-eater is by the habit rendered weak, nervous, timid and irresolute, and rarely attempts to commit suicide; and he knows well, that if he did so, his acquired tolerance for opium would render the issue doubtful. On the other hand, to those who know the fatal properties of the drug, but are unaccustomed to its use, it offers a pleasing, painless and seductive mode of death. To prove that this view is "not supported by an examination of the official statistics of suicide in the different provinces of India," the medical expert gives the following table:—

| PROVINCES. | Total annual suicides per mille of population. | Proportion of suicides by opium to total suicides. | Annual average consumption of opium per head of population. |
|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|
| North-West Provinces and Oudh, average of 5 years | 61 | 18.5 % | 24 grains.* |
| Madras Presidency ... | 54 | 0.05 " | 14 " |
| Central Provinces ... | 49 | 2.4 " | 34 " |
| Bombay Presidency and Sind, average of 4 years | 46 | 9.5 " | 46 " |
| Bengal, average of 5 years | 39 | 11.1 " | 15 " |
| Punjab, average of 5 years | 24 | 9.0 " | 42 " |
| Assam, average of 8 years | 20 | 5.0 " | 141 " |

That this table of statistics cannot be accepted as even approaching to accuracy regarding opium suicides, will be made clear by the following facts regarding Bengal and Calcutta. The following quotations are from the most recent, reliable and authoritative statistics collected by DRS. EVANS and CHURN LALL BOSS in their joint paper read before the Indian Medical Congress at Calcutta.†

It is generally admitted that in the matter of statistics Bengal is farther advanced than any other province in India; yet of Bengal the authors say:—"We regret, to say

* North-West Provinces only, Oudh is 15 grains per head.

† The necessity for an Act restricting the free sale of poisons in Bengal.—L. M. R., Vol. VIII, 4, pages 172, 173, &c.

that no returns are available for the whole province of Bengal to show what proportion of suicides is due to violence and what to poison; nor are all the cases of suspected suicide by poisoning that occur, referred to the chemical examiner."

After stating the excessive number of suicides by poison in Calcutta—"for the five years 1889 to 1893—236 cases occurred or an annual average of 68·84 per million. Of these cases 23 were due to arsenic and 167 to opium and 46 to other poisons;" they ask: "Is there any reason to suppose that suicide by poison is more frequent in the large towns of Bengal than in rural districts?" They answer in the affirmative with the following judicious reservations:—"It is possible, however, that a considerable number of cases of suicide by poison occur in rural districts, that are never reported to the police or brought to light in any way. Instances of suicide also occurring in families of respectable and influential individuals are no doubt often secretly disposed of to avoid scandal." It may be added that in many rural tracts of Bengal opium shops do not exist, and the drug is therefore not conveniently at hand for suicidal purposes,—in such tracts, although suicides by violence and from other poisons may be numerous, those from opium will be less frequent. On the other hand, in opium-growing districts, or districts in the vicinity of which opium is cultivated, the drug is always at hand—in these districts the great majority of suicides will be opium-suicides. We are of opinion that if it were possible to obtain correct statistics of opium-growing districts such as Gaya, they would clearly indicate that opium suicides bear a very close relation to the cheapness and accessibility of opium in rural districts. But Drs EVANS and BOSE inform us that,—“At the present time, the available statistics afford no information as to what proportion of the total suicides occurring in the province are due to violent methods, and what proportion to the use of poisons.” If they were obliged to write as above regarding the statistics of suicides in the province of Bengal, how much less reliable must be the statistics which refer to the other provinces of India. But the author of the Medical Memorandum, nothing daunted by these difficulties, proceeds to prepare Table IV, which he compiled, he tells us from the “total suicides in the several provinces of British India.” In other words, the very provincial statistics of which Drs. EVANS and CHUNI LAL BOSE write—“the available statistics afford no information” are precisely the figures upon which he relies to prove that the proportion of opium-suicides to the total suicides in the province is only 11·1 per cent! And that there is no “connection between the amount of (*licit*) opium consumed in a province and the prevalence of suicides in that province—this latter statement, as we have already shown, no one maintains. Let us examine these figures more minutely: (1) We may lay it down as incontrovertible that in no district of Bengal are all the suicides reported; it is only when crime is suspected that suicides are brought for *post-mortem* examination. (2) In opium-growing districts, such as Gaya, opium-suicides form 80 to 90 per cent. of the total suicides reported. (3) In such (opium-growing) districts every cultivator has his own stock of *illicit* opium always at hand; he therefore does not use

licit opium at all, hence the consumption of *licit* opium in these districts is represented by a mere fraction of grains per head per annum thus:—

| | | | | | | |
|-----------|-----|--------|-----|------|-----|--------|
| Champanan | 8 | grains | per | head | per | annum. |
| Saran | 9 | " | " | " | " | " |
| Shahabad | 2 | " | " | " | " | " |
| Mongyr | 2·4 | " | " | " | " | " |
| Gaya | 5·2 | " | " | " | " | " |

Were it not that there are a few towns like Gaya scattered over these districts—where opium-eaters are obliged to buy, sometimes, small quantities of opium—there would be no *licit* consumption at all shown in the official statistics. Would it be in accordance with facts, as we know them, for us to infer regarding these opium-growing districts that there is little or no opium consumed in them, because the official returns for *licit* opium are so low? Surely not. Yet this is one of the inferences Sir WILLIAM ROBERTS' statistics would lead to. These opium-growing districts of Bengal, and presumably of other provinces in India, show only a fractional opium consumption per head per annum, with 80 to 90 per cent. of opium-suicides out of the total suicides from poisons!

The Commissioners themselves had no such thoughts in their minds regarding these low averages; for they point to the fact of opium cultivation as an explanation of the low average consumption of *licit* opium in opium-growing districts. In other parts of rural Bengal vast populations exist, where opium is not grown nor used largely, and among them *opium suicides* are not so frequent, as the drug is not conveniently at hand. We thus see, that for rural Bengal, the official provincial statistics cannot be accepted as a safe guide, because they do not distinguish between suicides by violence, by opium, and by other poisons; nor can the actual consumption of opium be ascertained in opium-growing centres, because of the universal use of *illicit* opium in these districts. Those difficulties and discrepancies in themselves would utterly vitiate the provincial statistics, and render them not only worthless, but positively deceptive and misleading.

But happily we are not left wholly in the dark regarding opium-suicides in Bengal, for we have fairly accurate statistics for the town and suburbs of Calcutta, which will throw some light upon the figures for the whole province.

Drs. EVANS and BOSE—to whose able paper we are indebted for the following figures and facts regarding Calcutta, state:—

“Among the population dwelling in the Municipal area of Calcutta during the years 1st June 1893 to 1st June 1894, 52 deaths by poison occurred, of these 44 (all suicides) were due to opium, or 84·6 per cent. Also that of the total number of cases of poisoning,—165,—brought for treatment to two Calcutta Hospitals—Medical College and Mayo Hospital—94 cases were cases of opium poisoning, or a proportion of 57 per cent. as compared with all other poisons used in these cases. These percentages of opium suicides are considerably higher than “11·1 per cent.” We do not however forget that these high percentages of opium-suicides within the Municipal limits of Calcutta are not obtained in rural districts, such as Eastern and Lower Bengal proper where opium is not cultivated and little used by the

people; but we do maintain that in opium-growing districts or wherever opium is cheap and easily accessible, the percentage of opium-suicides to suicides by all other poisons will be found even higher than 84.6 per cent.

It is the cheapness and unrestricted accessibility of opium, together with its soothing, painless, hypnotic properties, that account for its more frequent use for suicidal purposes than other poisons. These views are not "anti-opium" views; they are put forward by the officials above referred to as follows:—"Since the easy accessibility of poisons is responsible for a large number of suicides, it is this very easy accessibility of poison which should first be dealt with by legislative interference. Opium has been shewn to be responsible for the majority of cases of suicide in the Municipal area of Calcutta, whether by violence or otherwise, and opium is to be found in any quantity (in licensed shops) every-where throughout the country."

And "that taking the results of ten years as the basis for the calculation, opium and arsenic constitute 90 per cent. of the poisons detected. Opium by itself is the poison detected in 58 per cent. Then bearing in mind the statement already made regarding these cases of opium-poisoning, this figure, viz., 58 per cent., may be regarded as indicating the conditions influencing poison selection in cases of suicide by poison throughout the province."

Then in support of their views that the use of poison for suicidal purposes is increasing they say (a) "That the crime of self-destruction has enormously increased during the last ten years, and that the cases which have produced the increase are almost entirely those of suicide by poison; for while during the five years 1876 to 1880 the average of suicide by poison to the population was 36.42 per million, in the period 1889 to 1893 it had risen to 68.84 per million, or nearly double. (b) Of 100 cases of suicide occurring in the town and suburbs of Calcutta, 56 are due to poison; and of the 56, in 40 opium has been the poison taken (or opium 71.4 per cent. of total poison) in 5 arsenic, and in 11 other poisons."

These are our reasons for rejecting "Table IV" constructed by Sir WILLIAM ROBERTS from provincial statistics, reasons which are patent enough to any one familiar with Bengal—and they prove we think beyond cavil or doubt that the average suicides and average opium consumption taken from provincial statistics are utterly untrustworthy. With these explanations, and emendations, we can even agree with Sir WILLIAM ROBERTS when he says:—"Nor is there any connection between the amount of (*licit*) opium consumed in a province and the prevalence of suicide in that province," for no one, so far as we are aware, has given expression to any such crude and inaccurate statement before the Royal Commission on Opium.

THE PHYSICIAN AS A MORALIST.

THE ideal physician is an embodiment of so much knowledge combined with so many qualities and virtues that it is hardly to be expected that any age can have the proud distinction of possessing more than isolated examples of such men, or that the world's history will be adorned with anything more than a few scattered specimens of such. It is well, however, at times to

contemplate such an ideal; for such contemplation may lead to the attainment of at least some of those qualifications and endowments which enrich the ideal, and ennoble our profession. One among the many of those considerations is that of the physician as a moralist; and it is as such that we propose to view the model man of our noble calling. As a moralist the physician has ample scope and special opportunities for effecting good among every sort and condition of men. Youth and age alike require his moral counsel. With the individual he possesses an influence, and to the nation he is a material help, if not a necessity, in fashioning the coming man or in benefiting a people. From the earliest moments of his professional career he has witnessed the results of moral delinquencies, of youthful indiscretions, and of social abuses. Almost every form of ailment points its own moral which can be turned to the advantage of suffering humanity, to the benefit of future progenies, to the improvement of whole communities, or to the amelioration of the condition of a whole nation. The true physician knows that his mission is not limited to the healing of disease and the maintenance of health, but extends to, and is materially concerned with, domestic happiness, social advancement, political good, and the stability of a nation. He sees how diseases are engendered by pandering to one's vanities, or in paying unreasonable homage at the shrine of fashion; he notes the influences for good or ill that the habits of an individual have on the duration of life; he knows the sphere and surroundings in which childhood and youth should be nurtured, in order that they may develop into healthy manhood and womanhood; and he endeavours to minimise those ill-advised and regrettable unions which give promise of unhappiness and of a weakly progeny. In short, he is an adviser in matters not only affecting the well-being of the babe yet unborn, but all along the pathway of existence he endeavours to help his fellow-passengers not only to reach its most extreme limit, but to do so under the most favorable circumstances possible. In almost a countless variety of ways these are the thoughts, words and actions of individuals under the moral direction and control of the physician. As a moralist he is moreover an important and indispensable state help in the administration of justice, and in guiding the powerful arm of the law. How often by his careful deliberations has he not brought home conviction and punishment to the culprit who, by his craft and cunning, may otherwise have defeated the ends of justice? How often has he not rescued the guiltless from the disgrace and ruin which the machinations of unscrupulous persons prepared for them? How often by his care and investigation has he not saved from death at the hands of the executioner, the supposed murderer whose crime after all was not so heinous as it at first appeared? In all these, and in many other ways besides, is the physician a material regulator and controller of crime, and of offences against society; and he is an important factor in the maintenance of a wholesome fear and respect for those laws and enactments framed for the good, the peace, and the security of a people and of a State. From all these considerations the true physician is a most desirable friend; for, as Dr. JOHNSON has said, "the

greatest benefit which one friend can confer upon another, is to guard, and excite, and elevate his virtues ;" and not only does the true physician feel that it is part of his mission to warn and counsel friends and all others with whom he is brought into professional relationship, against the direful consequences of moral errors and of offences against the laws of nature and of society, but he is moreover specially qualified to tender admonition in these matters. In the spirit of patience and resignation with which he often sees physical suffering endured he learns many a lesson which enables him to carry wholesome instruction to other beds of pain, and into many afflicted homes ; for though he may not have been reared in the lap of affluence, or he not himself a stranger to fortune's smiles and the good things of earth, he often sees that

"By woe, the soul to daring action swells ;
By woe, in plaintless patience it exerts :
From patience, prudent, clear experience springs,
And traces knowledge through the course of things,
Thence hope is formed, thence fortitude, success,
Renown—what'er men covet and caress."

Thus do his experiences enable him to impart consolation to the suffering, fortitude to the sick, and hope to the dying ; thus leading them to higher thoughts, creating a spirit of forbearance, and turning the miseries of life to this account, viz., to "quicken and exalt our sense and relish of that more ample greatness, that more exact goodness, that sense of God." In the faithful and zealous discharge of his duties he teaches the important Christian doctrine of universal charity and brotherly love. His untinted efforts are put forth as earnestly in the relief of the rich as of the poor. His hearty sympathy is aroused whether the sufferer be a LAZARUS or a DIVES ; and he begrudges not to hazard his health, strength, nay his very life, in ministering to his suffering fellow-beings. Medicine has given a list of martyrs to science, of which she is rightly proud ; and it has always been the characteristic of her votaries to sacrifice much for the benefit of mankind. In his devotion to duty under the most adverse circumstances, and even perhaps in the most loathsome surroundings, the physician proclaims the truth of CARLYLE'S words that "there is a perennial nobleness, and even sacredness, in medical work."

COMMENTS AND NEWS.

THE WORK OF THE GRANT COLLEGE MEDICAL SOCIETY IN BOMBAY.

WE have not space at our disposal to reprint the reports of the various medical and scientific societies in India, but we appreciate their excellent work, and from time to time keep our readers in touch with their doings. We have much pleasure in noticing the more salient points of the review of the work done during the past year by the Grant College Medical Society, Bombay, as delineated by its President, DR. BHALCHANDRA KRISHNA, at the Annual Meeting held in February last.

The Society has been strengthened by fourteen new members, a total of 174 having been now reached. Its financial condition—an important matter with all working bodies—is encouraging, the total income having been Rs. 1,376-0-5, and the expenditure Rs. 1,214. Thus, with the balance on hand

previously, there are Rs. 662 left in favor of the Society, which moreover holds Municipal bonds to the value of Rs. 1,500, and has been substantially favored with the support of the Maharaja of Kolhapur, the Maharao of Kutch, the Dewan of Palanpura and the Maharaja of Idar, who have endowed the Society with Rs. 300, 200, 200, and 100 respectively. The material support that is from time to time accorded by native potentates to Western medicine is very gratifying indeed. The princely support given to the investigation of chloroform anesthesia by the Nizam of Hyderabad, and the interest that the Maharajah of Patiala is evincing in the investigation of fevers, are important beneficent acts which will hand down the names of these potentates to all generations and ages.

Ten regular, and eight special meetings were held during the year ; and papers of no small interest to the profession were read and ably and thoroughly discussed. The titles of some of these may be mentioned, as those particularly interested in any of them may be benefited to know that they are to be embodied in the report of the Society's Transactions for the year. These are : "Notes on a case of Pityriasis treated with a solanaceous plant named *Solanum Nigrum* ;" "Treatment of syphilitic affections of the eye by subconjunctival injections of perchloride of mercury ;" "Notes on a curious case of skin eruption following vaccination ;" "Lithotripsy in girls under 12 years ;" "The extraction of piles as practised by Native Hakims." The President, we may mention in passing, utters a note of warning against these self-constituted pile-curers, who "not only screw out money from people, but inflict such untold misery on their victims, that sometimes the patients are either rendered miserable for life, or die from the effects of the treatment." The titles of the other papers are "Notes on a case of Acute Nephritis with Uremic convulsions ending in recovery ;" "The radical cure of piles with notes of cases, by injections of pure carbolic acid into the base of internal piles ;" and "Observations on the healthy healing of wounds and the use of simple and inexpensive dressings." DR. KRISHNA deplors the fact that there is now a lack of that interest which the professors of the College formerly took in the Society. Their attendance and contributions are now like angels' visits—few and far between. Much however as the cultivation of friendly relations between all castes and creeds of our profession is desirable, and the co-operation of all its members in the advancement of medical knowledge is to be welcomed, we think that the Society possesses enough of vitality not to be seriously inconvenienced in its development and progress by this withdrawal of professional aid ; and the Society will be able to proudly point to whatever meritorious work it may do as the achievements of indigenous talent. A new departure of the Society is that of inviting an outsider to read a paper at a meeting of the Society. This departure on liberal principles is certainly a happy one. The Society has memorialised the Chancellor of the Bombay University to be permitted the privilege of submitting the names of two members of the profession every year for nomination to Fellowships. The system of electing medical Fellows at present obtaining in India is certainly open to very unfavorable criticism, and if the privilege prayed for by the Society will not set matters altogether right, it at least will very much enhance the chances of real merit being more prominently brought under official ken and consideration.

We have to refer to a few remarks made by Dr. Krishna on the first Indian Medical Congress, which DR. KRISHNA is more disposed to characterize as a failure, rather than a success. The sectarian principles that were introduced into the meeting are likely, on future occasions of the same kind, to make the non-official party unwilling to take part in them ; and this has introduced an element which is

sure to operate in defeating the main object of a Congress, viz., the interchange of varied ideas. We think that with the impressions that non-service men who attended the Congress carried away with them, and the impression which those who did not attend have with good reasons formed, will tend to make the next Indian Medical Congress, whenever it may happen to be held, a very sparse gathering.

The Grant College Medical Society has entered upon its Jubilee year. We offer it our warmest congratulations; and we certainly agree with its President in thinking that the Jubilee cannot be more sensibly and substantially celebrated than by its taking the first steps towards having a College and Hospital of its own. We hope that the members will not lose sight of this excellent suggestion; and that before long the foundation stone will be laid of this monument, to bear testimony to the good work of the Society.

A MENACE TO THE PUBLIC AND TO THE MEDICAL PROFESSION.

We quote from *The Statesman*:—"Before MR. S. D. ROY, Deputy Magistrate of Sealdah, the case against MR. JOHN CROFT, which formed the subject of the recent criminal prosecution against him, was called on for hearing, when it was found that MR. CROFT had failed to enter appearance in Court. MR. OAKLEY, his assistant, here informed the Court that MR. CROFT was ill, and produced a medical certificate, signed by DR. CHAMBERS to that effect. The Magistrate observed that the bare medical certificate would not hold good without recording Dr. Chambers's evidence. The case was adjourned for an hour and MR. OAKLEY was requested to produce Dr. Chambers in court. Later on, the case was resumed, when MR. OAKLEY informed the Court that DR. CHAMBERS declined to attend Court without a summons being served upon him, and his fees paid down. The Magistrate then examined MR. OAKLEY, who deposed that MR. CROFT was lying ill with rheumatism in the Bellevue Hotel. DR. CHAMBERS attended him, and granted the certificate. The Magistrate here granted a warrant for the arrest of MR. CROFT with permission to be released on a nominal bail. MR. OAKLEY submitted that this procedure was an uncalled for hardship.

"Here we have evidence of extraordinary and irregular procedure on the part of a Police Magistrate. The italicised portions of the above quotation reveal two facts. (1) that a "bare certificate" signed by a duly qualified medical practitioner will "not hold good;" and (2) that a doctor must be "produced in Court" before his medical opinion can be accepted. We reiterate that Mr. Deputy Magistrate S. D. ROY's action is extraordinary and irregular. Hitherto in all Courts of law, a duly qualified practitioner's "bare certificate" has been accepted, the High Court and the Chief Presidency Magistrate's Court forming no exception to this practice. But here we find a subordinate judicial officer setting aside the practices of higher tribunals and demanding the fulfilment of certain acts which, while they are in themselves perhaps within the exercise of magisterial power, are fraught with considerable inconvenience to the public and to the individual members of our profession. The Magistrate's conduct, if permitted to pass unchallenged and unrestricted by higher competent authority, will become a precedent for other subordinates overwrought with a sense of their own mightiness, and thus a form of judicial oppression, making itself felt in many objectionable ways, will be exercised on litigants. In the first place doctors will be compelled at much personal inconvenience and worry and loss, both to themselves and to their patients, to attend court, where, as everybody knows, much precious time is fruitlessly wasted.

Then again, in order to attend Court, a doctor can only appear in the capacity of an expert witness, and he can demand any reasonable fee he chooses for the time he loses by attendance at the Court. This adds to the expensiveness of litigation, and is a matter which the public may well seriously consider.

We congratulate DR. CHAMBERS on his refusal to appear in Court on the peremptory demand of the Magistrate, and further, that he caused that gentleman to clearly understand that his professional services would have to be adequately paid for, before they were obtained.

We trust that doctors treated in this perfunctory fashion by law officers will always stand up for their rights and boldly insist upon those rights being respected.

We trust also that the Bengal Government will prevent further irregularities of this nature from being committed, as already complaint has been submitted to the Lieutenant-Governor of an arbitrary line of conduct pursued in this identical case in regard to the legality of the medical certificates of private practitioners.

THE USE OF CHLOROFORM IN LABOR.

THE question as to the justifiable extent to which chloroform should be used in labor has of late been much before the profession. Some maintain that it should not be employed at all in normal labors, arguing that "if a mother is unwilling to take upon herself the pains necessary for maternity, she is unworthy of it, and should not be married." This, and that the pains of maternity strengthen the affection of the mother for her child, and other arguments of a like nature are advanced by some against its use in natural deliveries. Another lot maintain that chloroform should be used exclusively in cases of difficult parturition; while a third set, adhering to the Baconian principle that it is "the office of a physician not only to restore health but to mitigate pain and suffering," would use chloroform in every labour case. Dr. W. B. SPRAGUE, in a paper read before the Detroit Academy of Medicine, reviews the teachings and experiences of obstetricians from the time of SIMPSON; and while concluding that not a single death has ever been conclusively shewn to be due to chloroform in labor, provided it were administered properly, and that post-partum hemorrhages and other dangers imputed to the use of chloroform in labor are fallacious, he summarises the advantages of chloroform anesthesia thus:—

- (1) More rapid dilatation of the cervix. It is useful in rigidity or spasmodic action of the os.
- (2) It preserves the perineum by relaxing the muscles, and allows of more manipulation.
- (3) The mother often restrains the contractions and labor is thus delayed. In these cases labor proceeds better with, than without the anæsthetic.
- (4) In cases of heart disease, when palpitation and dyspnoea are induced, the chloroform quiets the heart and removes an element of considerable danger.
- (5) The exhaustion and shock of severe labor are averted; and the contractile energy of the womb is conserved, thus protecting against post-partum hemorrhage.
- (6) Reflex contractions of the abdominal muscles are more easily induced.
- (7) Amelioration of suffering to the parturient woman.

DR. SPRAGUE finds a physiological explanation of the fact of the immunity from danger in the use of chloroform in lying-in-cases, in the doctrine promulgated by the Hyderabad Commission, viz., that the heart is never affected by chloroform except by over-dosing, and that safety is guaranteed by regular breathing; and as labor pains provoke long, deep, and full respirations, the element of danger is obliterated.

WHO COUNTERSIGNED THE MEDICAL CERTIFICATE?

WHILE Calcutta is ringing with the question, "Who is the official doctor who behaved so badly about the certificate," our contemporary, *The Anglo-Indian*, gives vent to the following comment on the subject:—"The day in which the Indian Medical Service was jealous of the honor of its members must have passed away, and another must have arisen in its place, which is hardly half so full of promise, if a story told by the *Indian Medical Record*, which bears the impress of truth in all its turns, does not inspire the *esprit corps* of the Service to provide some remedy for the evil brought to light. A chance was given to two Presidency Surgeons of countersigning a certificate granted to a Government official by an independent medical practitioner of sufficient standing to make it equally clear to both men that the only strictly professional course open to them was to attach their names to the recommendation of the non-official physician. One man signed the recommendation; the other, not to put too fine a point upon it, didn't. He, instead, without any examination whatsoever, of the patient, beyond that which a glance of his eagle eye, or it may be a scent of his eagle nose, instantaneously effected, made some contradictory recommendation, which might have injured the rival physician, if any particular value attached to his opinion. The more sensible of the two Presidency Surgeons examined the patient, saw that what the non-official doctor had said was the only thing to say, and gave it the support of his signature. The matter is, in one sense, of small importance, but in another, it suggests unpleasant questionings. Of two opposite statements, only one can be true, and adhesion to the other can only mean either ignorance or what Sir Richard Temple once called an "incorrect expression," and other people call by other names. To the general public, if they will take the trouble to think of the matter—which of course, they may not do, since even the vagaries of a Presidency Surgeon possess a royal road to public attention, this conundrum may be presented by the facts: If, of two officers and gentlemen, one behaves as an officer, and the other as a gentleman, which is who?"

MEDICAL CHARITY.

CLOSELY connected with hospital abuse, and as a consequence of it, is the manner in which the medical profession is exploited at the present time. The large amount of gratuitous medical relief given now-a-days, is NOT given at the expense of the so-called philanthropists who subscribe to the various hospitals, but at the expense of the medical staff, by whose gratuitous work the organization of the institution is carried on. The services of any medical man may, now-a-days, seemingly, be commanded by any one, without fee or award, e. g., in coroner's inquests, where, should the summoned doctor not come at once, in spite of being engaged with any important case, and should he enquire (naturally) whether he will be paid for his time and trouble, he is sure to be censured and condemned by the jury. He must come immediately he is summoned, without expectation of fee or reward; he may not relegate the inquest case to the parish doctor. Such conduct would be considered callous, inhuman and mercenary. When one reads of nearly half the population of a great city being gratuitously treated by us, one cannot blame the public for the aspect in which our calling is thus placed before them. In all other affairs of life, people are accustomed to pay for what they receive, yet all the culture, education, skill and thought of our profession—representing as it

does a considerable money value—must go without remuneration! The reform lies in our own hands and will never come about until and unless *universally* adopted. The only valid objection that can possibly be raised is that in connection with the poor. In this case medical relief resolves itself, into Hospital and Poor Law relief. It lies now with the staff to insist on the supporters of hospitals the fact that their time and labor must be remunerated, funds for which can just as easily be forthcoming as for the dieting, drugs and nursing in the hospitals. In the case of Poor Law relief the pittance now given to parish and district medical officers should be increased commensurate with their laborious and responsible duties.

JOHN MARTIN COATES, M. D.

WHEN troubles come and storms rage high
And quarrels rampant ride,
When the fight twixt helmet and beaver draws nigh.
Who will quell the conflict's tide?
A terrible gloom throughout India's spread
Over North, South, East and West.
For our friend John Martin Coates is dead.
Gone our noblest and our best.

No more shall we hear his welcome voice!
No more see that winsome face!
No more can he teach us, "in sorrow rejoice,
And manfully run life's race."
Though India grieve and the Service mourn,
O'er the radiance once he shed:
His ashes will rest in the clay cold bourne
Till the grave gives up her dead.

Civilians weep for the one we loved,
J. M. Coates who loved us so,
Let us pray that his spirit from realms above
May smile on us here below.
Service and Civil join hands once more,
Remembering all that he said:
Let bickerings cease, they grieve him sore,
His body, *not* soul is dead.

Our sobs us chok'd, not a word was spoke,
But eyes look'd rainy weather;
With that dead who had led us, the last link broke
That kept us joined together.
We moan'd and groan'd as his corpse we laid
In that narrow Indian grave:
Yet from our hearts will he never fade,
Our glorious friend and brave.

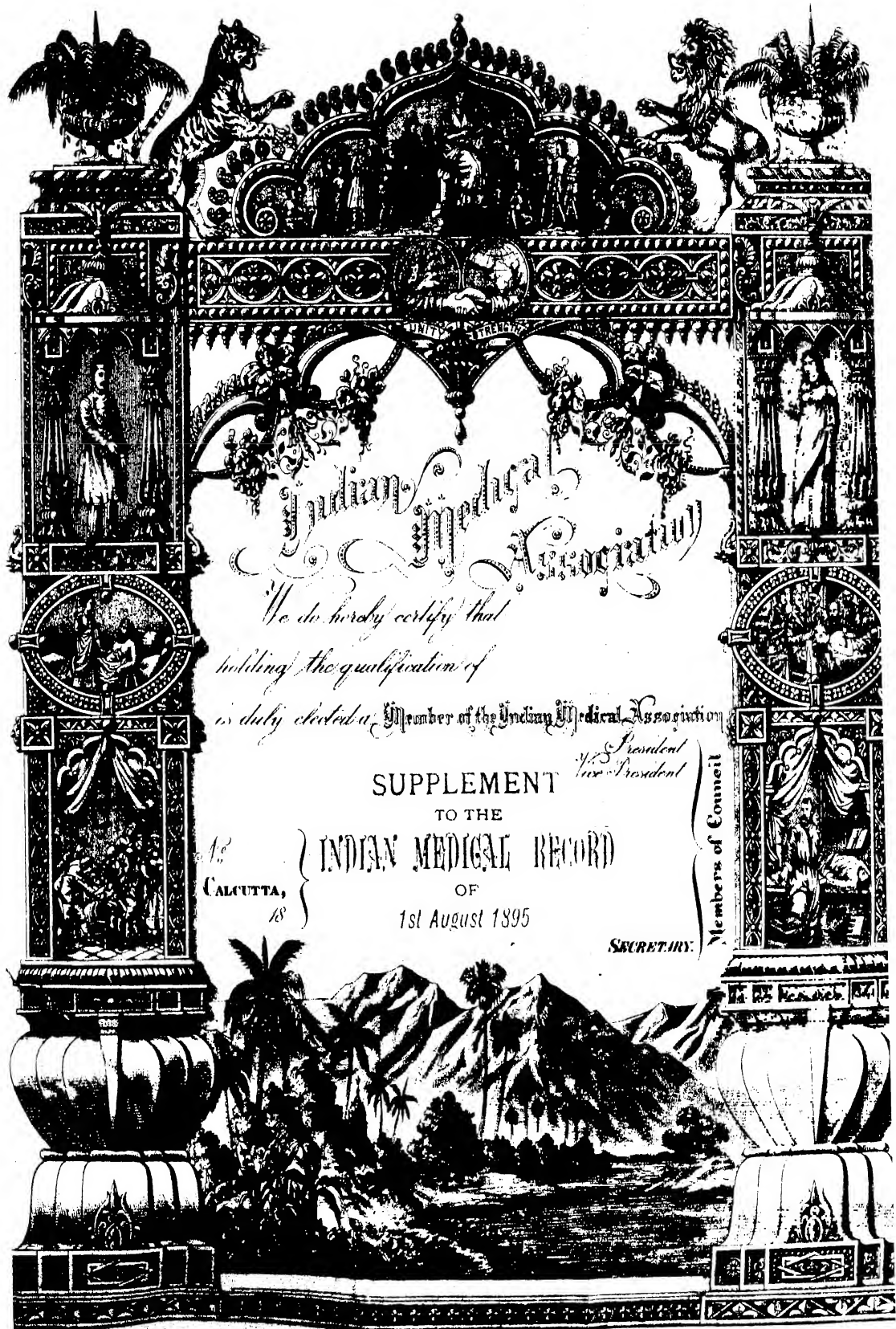
Though we'll meet no more in this world of care,
Where our best seems done in vain;
And the cup of joy is clogg'd with despair,
While pleasure is mix'd with pain.
But if we take home his lessons of love,
And follow the path he led,
Perhaps we may meet in the world above,
When the grave gives up her dead.

Doctor Coates our teacher and friend, farewell!
Farewell! rest your body in peace;
But close mistat "your boys" may your spirit dwell,
Your interest never decrease.
Till amity reigns in the place of "fight"
And peace universally spread,
Then we may meet in the realms of light.
When the grave gives up her dead.—R. SETON CHEW.

INSANITARY CALCUTTA.

THE Calcutta Municipality and Health Department have received their *quietus* from the Bengal Government. The letter of the Bengal Chamber of Commerce on Calcutta sanitation and the reply of the Government thereto, are both specimens of masterly activity.

Our columns have repeatedly given evidence of the intense feeling of public indignation in regard to the culpable neglect of the sanitary needs of this city by its Municipal Board. This loud-voiced body has long ceased to command



Indian Medical Association

We do hereby certify that
holding the qualification of
is duly elected a Member of the Indian Medical Association

SUPPLEMENT

TO THE

INDIAN MEDICAL RECORD

OF

1st August 1895

CALCUTTA,
18

SECRETARY

President
Vice-President
Members of Council

either public confidence or respect, and the welfare of the tax-payers seems to have been a matter with them of microscopic importance. The European community is so imperfectly represented in the Municipal Government of Calcutta, that urgently necessary reforms have passed unheeded; while a species of terrorism pervades every department owing to the supremacy of the native vote. The Health Department has been crippled by fear of the native vote, and every official in that body realizes that his bread and butter depends upon the manner in which he steers his craft with this powerful wind. It is comforting therefore to find the supreme arm of the Local Government taking command of an almost reckless and aimless managing body, in the hope that what is urgently needed for the protection of the health of the population of a very large city will be done, and done without delay.

The Bengal Government is to be congratulated, and we feel sure that not only the European community, but every honest Indian rate-payer will sympathise with and support the action of the local authorities.

It is, we believe, due time that the Health Department of the Calcutta Municipality was completely reorganised and a thoroughly practical officer placed at its head.

A MEDICAL TARIFF FIXED BY LAW.

WE quote from the *Lancet*:—"There is a Bill before the Legislative Council of the Cape of Good Hope, a short Bill to amend the Medical and Pharmacy Act of 1891, which provides a tariff of fees for medical practitioners. No practitioner will be entitled to recover any charges exceeding those in the tariff, save in pursuance of any special agreement between the parties."

Schedule Tariff of fees for Medical Practitioners.

Examination of any person and certificate ... £1 1 0
Every visit within the limits of any town or village—

By day ... 0 5 0
By night ... 0 10 0

Every visit outside such limits, besides the charges allowed by the tariff—

If travelling at own cost: per hour ... 0 10 0

If travelling at cost of patient: per hour ... 0 7 6

Any confinement ... 3 0 0

Any certificate of cause of death not involving post-mortem ... 0 10 0

Any surgical operation involving the loss of any limb ... 10 0 0

Any ordinary surgical operation ... 0 10 0

It cannot be said that this tariff errs on the side of excess.

It is very vague. "Any ordinary surgical operation, 10s."

It is very doubtful, too, whether the Legislature is acting wisely in fixing fees. Practitioners who most respect themselves will make their own terms. We shall be curious to know whether such a Bill becomes law.

FACTS ABOUT INDIAN BEER.

A CONTEMPORARY publishes the following statistics of the beer industry in India, brought up to the end of 1894. The first Indian brewery was established at Mussoorie so far back as 1850. Two years later another was opened at Kussowlie; in 1860 the Murree Brewery was founded, and in 1862 a fourth at Simla. Now there are 22 breweries at work, twelve being in the Himalayas; while at Poona, Bangalore, Ootacamund, Quetta, Rawal Pindi, Lucknow, and Mandalay beer is also extensively brewed. The Murree Brewery has the largest output—811,000 gallons being credited to it in 1894, Poona coming next with 793,000 gallons. The total number of gal-

lons brewed last year was 61, 121, 905, the average annual production for the preceding five years having been only 5,285,000 gallons. This shows that the industry is steadily expanding. The troops consume about 55 per cent of the whole amount, the civil population taking the rest. The Government import no beer at all for the army, but some regiments and batteries still get their supplies from England. The quantity imported annually is about 2,850,000 gallons, and this meets the want of soldiers and civilians who prefer beer brewed in Europe. The national beverage is now produced successfully in the plains, though it was long thought that it could not be brewed in a tropical climate. In 1894 over two million gallons were thus brewed, and the quantity is likely to increase. The output has been nearly doubled in the last ten years.

THE CERTIFICATE OF MEMBERSHIP IN THE INDIAN MEDICAL ASSOCIATION.

WE have much pleasure in issuing as a special supplement to our 1st August number, a copy of the Certificate of Membership in the Indian Medical Association.

Art critics have pronounced its design and workmanship as perfectly exquisite. We have a hope that members of the Association will be of a like opinion. The certificate is on parchment and is 14×12 inches in size, above is a replica shewing Hygieia the goddess of health, distributing relief to the halt and the maimed and sufferers of every description, who approach her on either side. Beneath this are two hemispheres, representing severally the maps of Great Britain and Ireland and the Indian Empire; with hands clasping across the hemispheres, supported by a motto scroll, "UNITY IS STRENGTH." The sides consist of oriental pillars of the most delicate structural designs, representing Indian architecture of the most beautiful type. The bodies of the columns are made up of replicas representing well-known medical paintings, such for instance, as JENNER'S first vaccination, VERALDUS lecturing on Anatomy on the dead subject, CHABOT delivering his great clinic on cranial surgery for hystero-epilepsy. The base of the design is made up of a very illustrative sketch of Indian scenery. Surmounting the columns are the emblems of Great Britain and India in the form of a lion and a tiger. The centre of the design is filled in with the certificate form of the Association, with space for the signatures of the Members of Council.

All members who have paid in their subscriptions may now claim their certificates, and they would much oblige if they would kindly forward a post-card request for the same, giving their names and addresses clearly written, to DR. WALLACE, Secretary, Indian Medical Association, 150, Dharamtala Street, Calcutta.

A MEMORIAL TO DR. COATES.

SELDOM has so fitting an occasion arisen, in which the local profession could rightly honor itself in honoring a man who was, every inch of him, A FRIEND OF INDIA. DR. COATES was one of the staunchest friends the local profession has ever had. To allow the memory of such a man to be lost to coming generations of Anglo-Indian and Indian students, would display a melancholy lack of appreciation. A public movement is on foot in Calcutta to raise a suitable memorial to DR. COATES, and we feel sure that hundreds of pupils of the Calcutta Medical College and numerous practitioners throughout Bengal and Upper India will feel it a privilege and a pleasure to take part in the raising of such memorial. We trust therefore that our brethren will need no further entreaty than the bare announcement of the decision and appointment of Treasurer and Committee to deal with funds, as shall be made at the public meeting shortly to be held in Calcutta.

We learn that a similar movement on this behalf has already been made, and that some subscriptions for the purpose have already been collected. We congratulate the promoters, and trust that their action will meet with a large amount of success.

DEATHS BY WILD ANIMALS IN THE CENTRAL PROVINCES OF INDIA.

WHILE fewer human beings were killed by tigers and kindred animals in the Central Provinces in 1894, the number of deaths from snake-bite went up to 1,087 as compared with 1,084 in 1893. Cases of fatal snake-bite were three times as numerous in Bhandara as in the previous year. On the other hand, only 102 human beings were killed by tigers instead of 119. Leopards and panthers accounted for 25 deaths against 30, but only 12 deaths are ascribed to bears compared with the 26 of the previous year. Six children were carried off by wolves in the Saugor District, whereas fourteen innocents were destroyed in the same way in 1893. The mortality among wild beasts was heavier than before, owing largely to the presence of European sportsmen. Two hundred and sixty-one tigers were killed compared with 207; 538 leopards instead of 500, and 154 bears compared with 106. An additional number of wolves, hyenas, jackals and snakes was also despatched. The increase among the cattle slain by these creatures is, however, very alarming. Ten thousand heads are reported to have been killed during 1894 as against 8,000 heads in the year preceding. It is possible that the returns are at fault.

THE INDIAN PRESS ON THE RECENT ILLEGALITIES OF THE CALCUTTA HEALTH DEPARTMENT.

THE *Indian Nation* says:—"It does not appear that the Health Officer's notice addressed to small-pox patients which we considered, has attracted the attention of the Commissioners. There has been in the General Committee no question or motion about it, and no steps seem to have been taken to have the notice withdrawn, or if the Health Officer is prepared to defend it, to have it discussed. We are afraid the *Bangabasi* is right when it says that all the agitation of the 'Babus is to secure their own interests. The Babus know very well that the notice is not likely to be enforced against them, and it is a matter of little consequence to them whether *Domes* and *Chamars* and coolies are banished from their homes or not. Why should they move when they are safe? 'Rights and privileges' mean rights and privileges of the cultured and well-to-do few, not of the people, except upon such a supposition as this, not of course a charitable one, it is difficult to account for the indifference of the Commissioners who sit on the General Committee to a serious invasion of private liberty."

SHOULD PHYSICIANS DEAL COURTEOUSLY WITH ONE ANOTHER?

It appears almost absurd to ask the question, "Should physicians deal honorably and courteously with one another?" but there are so many instances of flagrant unethicallity and discourtesy on the part of the most reputable physicians that *The Medical News* thinks it necessary to submit the question for consideration. Professional courtesy is very often forced and is influenced by one's own professional interest and advantage. Physicians assume to be great respecters of their ethical code in dealing with their superiors whom they are stipitious not to offend, while they trample ethics under foot in their dealings with juniors and those of less repute. Generalists stick to the patients whom they have been requested to advise about, and as our contemporary says, "all the acts of commercial rivalry are regularly used to estab-

lish and hold the market against all rivals." All these infractions of the ethical code are enfeebling the *oppositi de corpore* and are antagonistic to unity, which associations are endeavouring to create in the profession.

AMERICAN OPINION ON THE OPIUM COMMISSION.

We quote from our excellent contemporary the *Pacific Medical Journal*. "In 1893, there was a British Royal Opium Commission appointed to consider the evils of opium-eating and the financial difficulties that would be involved should the traffic be abolished by law. The Commission has reported that it not only found no evil from the 'temperate use of opium in India,' but that in many instances its use is 'even beneficial.' The finding of this Royal Commission reminds us of the findings of a Scotch beadle on the use of alcohol. The elders of a church had reason to suspect that their good old minister was occasionally taking a little too much *uigis beata*. With the characteristic caution of the race, they thought it well to have their suspicions verified by the testimony of the church beadle. They consequently inquired of ANDREW if he had ever seen the good doctor the worse for liquor; ANDREW replied that he had never seen the doctor the worse for liquor, but he had often seen him mickle the better for it."

MEDICAL PRACTICE AND SWEETHEARTING.

THE *Medical Times and Hospital Gazette* is responsible for the following story, which points a moral:—"An Edinburgh graduate, soon after starting practice in a town north of the Tweed, became attached to a young lady residing at the outskirts of the town. For a time he fairly divided his attention between his patients and his sweetheart, but as his love ripened he devoted more time to her, with consequent neglect of his practice. When patients called at his surgery, it often happened that they were unable to see him until they caught him up at the house of the young lady. One night on returning home he found his name-plate had been removed, and great was his sorrow at the loss, until next morning, he found that, undetected, it had been screwed on to the front gate of the young lady's residence. The hint was not thrown away, and, although the course of true love is running just as smoothly, the patients have less cause to complain."

WHAT IS OUR DUTY IN ABORTION CASES?

"WHAT is our duty in abortion cases?" is the question which the censors of the Medical Society of the County of New York have had under consideration. As professed abortionists they have often shifted their crime on to the shoulders of respectable practitioners. Whenever called to a case, it is necessary that the practitioner should act so as to protect himself against the law charging him with complicity in the act. The law demands that all suspicious cases be reported, and so long as the practitioner knows or suspects, or has reason to believe that the cause of abortion was criminal, nothing in professional ethics will save him from the risk of legal punishment if he fail to report the matter. The practitioner however must be very guarded as to how far or in what cases he, in respect to professional obligations, avoids disclosure of the circumstances.

THE DOCTOR WHO DIDN'T KISS.

THE Government of Madras has invited DR. CLARENCE SMITH, on behalf of the Secretary of State, to attend a Commission appointed by him to enquire into his case. The Commission will be composed of one officer with judicial experience and one military officer; the Commission will not take the character of a public or judicial inquiry. DR. SMITH will be allowed to have counsel and the right to

call witnesses, while the Commission will exercise a similar right.

Surgeon-Major SMITH has refused to have anything to do with a hole-and-corner Commission and demands a public enquiry. BRAVO SMITHY!

WANTED! PIOUS DOCTORS FOR MADRAS.

We quote from our ever-amusing contemporary the *Indian Planter's Gazette* :—

"In future when Madras wants a doctor she had better insert an advertisement something like this :

WANTED.

A Well-Bred Young Doctor with no tricks (osulatory or otherwise), must be good-looking, with good manners and paces and absolutely quiet in double harness, and especially quiet in a tum-tum. No Smiths need apply! Prices no object.

Apply with references, P.M.O., Madras.

THE DANGER OF LATIN PRESCRIPTIONS.

THE *New York Times* cites a case in which a baby three months old fell a victim to a Latin prescription. Castor oil was prescribed and written as *Ol. Ricini*. The dispenser used *Ol. Pini* instead and the babe died after two doses of the mixture into which the oil entered as an ingredient. The editor of the *Times* seems to think that the accident preaches the necessity of writing one's prescriptions in the language of the land. It is strange but evidently true that while castor oil would have saved, *Ol. Ricini* killed the child!

SHORT ITEMS.

Assistant Surgeon A Beale, I. M. S.; who is in medical charge of the R. I. M. S. "Clive," sends an interesting account of the Afghan Prince's experiences on the voyage to England. Among the Prince's retinue, there were quite a few ordinary illnesses on the way, and sea-sickness was the prevailing torture.

Healthful circulation, natural waists, broad shoulders, erect carriage, deep breathing sunshine, and open-air exercise give us the vigorous muscles, musical voices, fair faces, rosy cheeks, clear complexions, that brighten homes, lighten hearts, and cheer and bless the world with long and useful lives.

"It should be mentioned, in the interests of antiseptic purity and suffering humanity, that a good stout toothbrush, plenty of water, and some antiseptic dentifrice, applied morning and night, afford a greater safeguard against many diseases than many people are aware."—SIMS WOODHEAD.

There are 4,874 registered dentists in Great Britain, of whom 3,479 practice with no special qualification, but on the strength of their own declaration that they were engaged in the practice of dentistry before the passing of the recent act regulating the profession.

Dr. Allison, L. R. C. F. & S. Edin., whose diplomas were cancelled by the General Medical Council of Great Britain for some professional offence, has been fined £20 for continuing to use these titles.

We announced as the intention of Government to Knight Surgeon-Major Robertson and to give Surgn.-Capt. Whitechurch a V. C. Both these intentions have been carried out while Whitechurch has had his V. C. pinned on him by the Queen.

Professor Henry D. Littlejohn, M.D. of Edinburgh, has had the honor of Knighthood conferred upon him.

The Editor of the *New York Medical Record* says it is the experience of most physicians in this country that over-drinking, except in great moderation, leads to gastric troubles and to gouty, rheumatic and renal disorders.

Says the *Indian Planter's Gazette*:—"On dit Surgeon-Major Clarence Kissington Smith is to be forgiven, and that they only kept him so to speak in, *durance vile, pour encourager les autres!*"

A conference of veterinary officers is to be held at Delhi in October next for the purpose of arranging some common standard of education and plan of examination for Veterinary College students generally.

The following gentlemen from India have obtained the diploma of L. S. A., London:—B. L. Dhingra of Lahore; A. M. St. J. Wright of Madras.

The pain of inoperable cancer has been found by Aikmann to yield in many cases to salicylate of sodium in doses of ten grains three times a day.

Sudden deaths of aged bicyclists from heart disease are beginning to be reported. Aged people and those who are afflicted with heart troubles should not indulge in this exercise.

Mr. Chajoomal, C. M. S. of the Arvi Dispensary, writes of instantaneous relief to the pangs of scorpion bite by the subcutaneous injection of an 8 per cent. solution of muriate of cocaine.

Dr. Zama Feldstein, M.D., has been appointed Manager and Sub-Editor and Dr. J. E. Danenberg Jones, Sub-Editor of the *Indian Medical Record*.

Dr. Atmaram Pandurang has been nominated for election as Dean of the Faculty of Medicine, Bombay, Dr. Macouachie having left for Europe.

The Principal Medical Storekeeper, Madras, will in future be designated the Medical Storekeeper to Government, Madras Command.

The transactions of the Indian Medical Congress are printed and published. They form an ugly ill-bound volume, altogether a disgrace to the printer's art.

Advices to hand state that two more cases of plague occurred in Hong-Kong, and that the disease lingers on in Macao.

We understand that the cause of Dr. Coates' fatal illness is ascribed to his having drunk a glass of milk in the neighbourhood of the Calcutta New Market.

Dr. Barnardo, F. R. C. S., Edin. the well-known philanthropist and redeemer of waifs and strays in London, is to have a public jubilee testimonial on his 60th birth-day.

It is extremely encouraging to find so many Military Assistant Surgeons have enrolled themselves as subscribers to *The Anglo-Indian*. Let all help.

A case of death from eating Cayenne pepper preserves too freely, is reported from Southampton.

Surgeon-Captain J. E. Frank, Medical Staff, has been selected for employment with the Egyptian Army.

Current Medical Literature.

MERCOINE.

Influenza as a Specific Nervous Fever.

It has been pointed out that influenza in many instances appears to fall with severity on the nervous system. After a fairly large experience of the complaint I should be prepared to argue that it is a specific nervous fever. My reasons for calling influenza a specific nervous fever would be:—

1. Like cerebro-spinal fever, it is infectious and accompanied by most of the symptoms and liable to many of the sequelæ of that complaint.
2. The catarrhal symptoms are in most cases trivial.
3. The backache is spinal, and is not affected by posture or ordinary movement in the same way as lumbago. The pain in the limbs ranges from severe neuralgia to mere nerve fatigue or exhaustion.
4. The headache, delirium, tinnitus, etc., are due to implication of the cranial nerves.
5. The vomiting and diarrhoea are probably reflex.
6. The complications are mainly nervous—(a) temporary blindness from optic neuritis; (b) suspension of the senses of smell, taste, and hearing; (c) menorrhagia in females, vasomotor disturbance.

With the most fatal complication—pneumonia—there may be more connection traceable when we know more about pneumonia itself. At present, to bear out my argument, I would only say that pneumonia is a recognised complication of any exhausting disease.

I think we may take it that considering the enormous number attacked the increased mortality from pneumonia is no more than *pro rata*.

The sequelæ are mostly nervous: Insomnia, neuralgias (supraorbital especially), temporary inco-ordination, paresis (from peripheral neuritis), down to simple prickling or numbness in the fingers and toes, loss of memory, impotence, various forms of mental aberration and insanity, and in females, menorrhagia and angioneurosis.

Finally, my contention as to its being a disease of the nervous system seems to be borne out by the treatment most successful up to now. The drugs one hears most about are antipyrin and its allies, bromides, quinine in various forms, and the like, nerve sedatives and nerve tonics. Every fresh epidemic further convinces me that the whole train of symptoms may be traced to the toxic effect of the influenza poison or microbe on the whole nervous system, central and peripheral.—DR. HENRY WAITE in *Brit. Med. Journ.*

Convulsions of Childhood.

DR. CHENBACH, of Bucharest, has recently made a clinical and experimental study of this common complication of early life. Following the earliest experiments of FELTZ and BITTAS, and the more recent ones of BEUCHARD, the author has carried out a series of experimental studies by injecting the urine of epileptic subjects into the circulation of the rabbit. The conclusions which he has arrived at from this portion of the work are as follows: 1. The urine of convulsive affections, filtered and introduced into the circulation of rabbits, produces clonic and tonic convulsive manifestations. 2. These convulsions appear more rapidly, and are more violent than those produced by normal urine. 3. Prolonged boiling diminishes, in part, the toxicity of the urine, and modifies the tussive contained in it. 4. The presence of convulsant substances in the urine of convulsive affections appears to be proven. 5. Bromide of

potassium employed in the treatment of such affections being introduced into animals with the urine containing it, diminishes, or even prevents, such convulsions. 6. In convulsive affections of children the urine shows a more energetic and prompt action than that of adults under the same conditions. In the clinical study especial attention is paid to the convulsions appearing in the course of the infectious diseases. His conclusions are as follows: 1. It is to be admitted as probably the fact that convulsant substances are found in the organism and produce auto-intoxication. 2. Such auto-intoxications give the most satisfactory explanation of the production of convulsive phenomena in children during, or following infectious diseases. 3. Alterations in the liver, by diminishing its antitoxic activity, favor auto-intoxication, and consequently, the appearance of convulsions.—*N. Y. Med. Rec.*

Cardiac Dyspnea.

As the outcome of clinical and experimental observations, ZERNER has found that in voluntary forced respiration there results some loss of respiratory energy in consequence of the increased resistance encountered in the air-passages. In cases of cardiac dyspnea this loss is considerable. That is, the mechanical respiratory quotient, the relation between respiratory activity and the volume of air inspired, is diminished. The characteristic of cardiac dyspnea resides not in increased frequency and deepening of the respiration, but in respiratory insufficiency. This is due to the swelling and rigidity of the lungs, the latter of which acts more especially by interfering with the expansibility of the lungs, so that the amount of air inspired not only is not increased proportionately to the respiratory activity, but under circumstances may be absolutely diminished as compared with the condition present during rest. There is thus a distinction to be made between relative and absolute dyspnea. In cases of cardiac dyspnea, the increased resistance to the passage of air takes part in the reduction of the effects of the respiratory activity. The mechanical respiratory stimuli resulting from deficient oxidation of blood or increased muscular metabolism, and which are present in the blood, cause a deepening and increased frequency of respiration, and may thus affect the results of the respiratory activity by leading to increased resistance in the respiratory passages. The dyspnea resulting from bodily exercise is of cardiac origin, and its degree depends not so much upon the amount of exercise, as upon the functional capacity of the cardiac muscle. The perfection of the effects of the respiratory activity may be considered an index of the functional capacity of the heart.—*Med. News.*

Malarial Pseudo-Tuberculosis.

CHARLES DUBA describes this condition as not infrequent in malarial countries. It attacks persons who for some considerable period have been affected with ague, and begins with marked weakness, depression, loss of appetite, and emaciation. A dry hacking cough, together with dyspnea and irregular temperature, especially towards night, supervenes. Hæmoptysis sometimes occurs. Physical examination shows evidence of apical consolidation. Examination of the sputa, however, does not shew the presence of tubercle bacilli. The cases recover under the influence of quinine and arsenic, provided the cachexia be not too advanced. The explanation of this condition, which may so easily be mistaken for true tuberculosis, seems to be that a local pneumonic process is started at the apices by an accumulation of pigments in the circulating blood. *Brit. Med. Journ.*

Dry Mouth, or Xerostomia.

DR. THOMAS HARRIS reports:—A woman, æt. 30, who had good health until three or four years ago, when the affection began. The mouth was absolutely dry, and there was a

complete arrest of secretion of all the salivary and buccal glands. There was also a decided enlargement of the parotid glands. The woman was anæmic, but all the organs appeared healthy. There was no disease of the pelvic viscera. DR. HARRIS referred to the very few cases of the malady which had been recorded, and especially to two cases recorded by Mr. JONATHAN HUTCHINSON of relapsing parotitis, one of which was associated with a certain amount of dry mouth. DR. HARRIS regarded xerostomia as a functional nervous affection, and thought that, probably, the parotid enlargement had a similar cause, and he referred to Mr. STEPHEN PAGET's communication on the relation of parotitis to injuries and diseases of the abdominal and pelvic viscera.

Brit. Med. Journ.

Transmissibility of Cancer from man to animals.

M. BOINET, after a long series of experiments on the transmissibility of carcinoma from man to animals, states that after having made repeated inoculations on the rat, the rabbit, and the guinea-pig, he concludes that histologic examination of the lesions which resulted does not authorize him to pronounce in favor of such transmission.—*Jour. of Amer. Med. Assoc.*

SURGERY.

The Treatment of Fractures.

DR. F. E. BUNTS in *Medical News* contributes a rather lengthy yet highly instructive article on the above subject. He deprecates that the treatment of fractures has dwindled in importance,—for while the patient may never lie to cavil at an unskillfully performed operation elsewhere, *e. g.*, for strangulated hernia, or a badly managed case of pneumonia or typhoid, a badly-set fracture with its deformity and impaired function of limb is a silent witness of the surgeon's want of skill, not to mention his being charged for mal-practice!

The indications for treatment he treats of under the following headings: (1) Reduce fragments to their proper places; (2) retain them in position; (3) combat inflammation; (4) restore function, (5) relieve pain.

1.—*Reduce fragments.* As to when this should be done, the author recommends that it is best to wait in simple cases until the surrounding parts are more favorable for work, especially should this be done in fractures which open into a joint. All that is necessary is to apply a provisional splint or support at the time of accident. This gives the patient intense relief and admits of his being moved and the fracture to be handled, where there is much swelling and inflammation, so that the outline of the limb is lost and there is much pain, we must remember that all our attempts at reducing the inflammation will be unavailing if we do not give the limb rest. This the author brings about by means of a provisional splint and elevation. These cases, he says, demand chloroform, which enables the surgeon to place the parts in a more favorable position, apply retention splints, elevation and cold applications, &c., to combat the inflammation. The reduction of fragments to their proper places, DR. BUNTS says, looks better in print and in text-books; but it is almost impossible in practice. All that can be done, and which is quite as effectual, is to restore as nearly as possible, the normal outlines of the parts. The usual method of reducing deformity are extension and counter extension, involving much stretching of the parts and intense agony to the patient. Now under chloroform the muscles relax and the operation resolves itself into a simple moulding of the parts. The exact nature of the fracture can also be defined, especially when it enters a joint.

When once properly reduced, the tendency to subsequent displacement of the fragments is very slight. The only danger of an anæsthetic is the tendency to too much manipulation of the parts, because the patient does not feel it. Even though unconscious, every motion of the jagged ends of the bones may lacerate nerves, muscles, arteries, &c.

(2) For the *maintaining of the fragments in position.* An endless variety of splints and supports of a countless number of shapes, curves and angles named after their inventors, flood the market. But the author justly condemns them all and recommends that the simplest splint, or strips of basswood should be employed, *viz.*, having decided on the best position for the limb, use that splint internal or external, anterior or posterior, which best holds the fragments in the desired position. Even fractures involving joints which will not admit of being treated in the extended position are best treated by the simplest and least complicated of angular splints. DR. BUNTS deprecates *fixed dressings*, *e. g.*, those of gypsum, as being productive of pressure-symptoms, and gangrene; splints should be removed and the parts examined and re-adjusted, if necessary, not later than the second day, as when the parts are once set, they do not displace readily, and as repair begins before a week, the exact position desired should be maintained.

(3) *Combating of inflammation.* Extend the limb and, apply cold or heat; cold in the aged and rheumatic may be contraindicated, but ice applied in plethoric cases does great good.

(4) *Relieve pain.* If the fracture is properly adjusted, anodynes are seldom necessary except perhaps on the first day or so,—persistent and excruciating pain is an indication for the prompt removal of dressings and careful revision of splints, padding, bandages and readjustment of the fragments. A very slight change in the dressing gives the patient great relief. The author thinks that if this point were more appreciated and its importance realized, there would be fewer and less frequent administrations of anodynes, and more careful investigation as to the dressings and consequently more carefully adjusted fractures. Serious pain at the seat of fracture after the second day points to a faulty replacement of fragments.

(5) *Restoration of function.* It is not possible to bring about complete restoration, but we should aim at the best possible results. Fixation of joints must be overcome by early massage and passive motion. Injured nerves and compressed and obliterated vessels cause impairment of function in most instances. From 2 to 3 weeks in children and 3 to 4 weeks in adults, is the limit of time for splints to remain on, except in fractures of the forearm, when 6 to 8 weeks is the rule. Compound fractures are not discussed, and as a summary, the author recapitulates all the important points in his article under 13 heads.

Catheterization of the Male Ureters.

CATHETERIZATION of the female ureters is a comparatively simple matter, and has been in vogue for important diagnostic purposes and the treatment of disease of the upper urinary passages for some time, but catheterization of the male ureters is another matter altogether and inseparably difficult, it would seem, until quite recently. BREXNER of Vienna altered the NITZ-LITZ Cystoscope in 1888 by placing a small canula along the undersurface of its posterior aspect. He succeeded once in the female only, but on the whole met with failure, so also FENWICK and HARRISON. In 1893, however, DR. JAMES BROWN of Baltimore published in the *Johns Hopkins Hospital Bulletin* a preliminary report, recording cases of successful catheterization of male ureters with comparative ease, and in some cases even without an anæsthetic, by rigid adherence to

certain details which he mentions—BROWN used BRENNER's modified Nissen-Lawrence cystoscope. He examines the entire bladder with the anterior Cystoscope; this is then removed and the BRENNER Cystoscope with a styllet attached is inserted, a search is made for the ureteral orifice, when found, the styllet is withdrawn and a catheter takes its place right opposite the ureteral orifice and is then gently pushed in. BROWN records three cases illustrative of the diagnostic value of this method of procedure. In cases of tubercular kidney, suppuration or neoplasm, &c., it clears up indubitably, the question of compensatory function, i.e., whether the patient has at least one good kidney which will do the work of the removed one. If this be so, the surgeon can then proceed to excise the diseased one with safety and benefit to the patient. In the course of discussion on DR. BROWN's paper, PROFESSOR WELCH emphasized the great importance of a practical application of this procedure, and related a case where a kidney (moveable) had been sent him for examination. It resembled so much a similar organ of a patient upon whose body the Professor had just performed an autopsy, and who possessed but one kidney, that he, suspected this too was an *only* kidney which had been removed! To the Surgeon's horror, his patient lived 10 days without passing any urine, and died with acute symptoms of *uræmia*! The Surgeon deplored that he had had no *sure* means of ascertaining before operating, whether the patient possessed a second kidney or not.

Is the baby tongue-tied?

DR. CHERVIN, the Director of the Institute for the Treatment of Stammerers at Paris, has made an interesting study of the surgical aspect of this subject. Much performed in certain regions of France, and formerly often done by some of the greatest surgeons, he thinks that its use has a very limited application; for example, in those rare cases where the tongue is bound down to the floor of the mouth by an inferior ankyloglossia, so that the tongue is immobilised. In certain cases where the frenum is too long, and by extending, even to the tip of the tongue, interferes with nursing, then not a mere incision, but an excision is required. This is exceptionally necessary, and though in itself insignificant, it may present serious danger in a little child. It is wrong to think that if an infant nurses badly its frenum must be cut. A little exercise upon the end of one's finger will correct this fault, an operative interference will be unrequired. Cutting the frenum is absolutely useless in correcting defective pronunciation, for this is only to be remedied by a methodical education of the voice by natural and rational exercises—*Gaillard's Méd. Journ.*

To render sponges aseptic.

AFTER many experiments in his laboratory, M. MEILLERE, Director of the Paris Academy of Medicine, gives the following method of rendering sponges aseptic: the shells and stones are first picked out by hand, then the sponges are beaten to remove sand, etc. They are then placed in a 1 to 100 solution of hydrochloric acid for four hours and next washed and immersed in a cold solution of permanganate of potash. Next follows a bath in a solution of sulphurous acid, after which they are washed until all traces of the last acid have disappeared. To preserve until needed, keep them in 5 per cent carbolic acid, 1 to 150 bichloride, or 1 to 300 of thymol solution. To cleanse sponges which have been used once, they are washed in green soap, rinsed in warm water and carried through the treatment mentioned above. It is advisable to submit them to a bacteriologic examination before using again.—*N. W. Med. Journ.*

OBSTETRICS AND GYNECOLOGY.

Present Status of Treatment of Fibroids of the Uterus by Electricity.

DR. A. LAFRÉCHON SMITH, of Montreal, stated that while he thoroughly believes in the operative treatment of fibroids of the uterus, he still saw good in the electrical treatment in certain cases. Electricity is not suitable for every kind of case nor for every kind of doctor, but it is as true to-day as it ever was that for the cure of pain and bleeding, the positive pole of the galvanic current, properly applied, is in the majority of cases effective. The percentage of successes is greatest in those cases in which the fibroid growth is interstitial; it is not quite so great in the sub-mucous variety, although in some cases it has been followed by the expulsion of the tumor from the uterine cavity. The plea for the early treatment of fibroids by electricity is quite as just as that for operative treatment, and even more so. It is entirely devoid of danger, which we cannot say of the operative treatment. One serious objection to the electrical treatment is the length of time it takes to apply it properly. The present status of the electrical treatment is not as good as it should be, because it has been tried by men of insufficient experience and therefore been found wanting. The fact, first mentioned by APOSTOLI, that electricity produces a febrile reaction when the tubes are badly diseased, is of diagnostic value. It is not true, as has been claimed by some, that applications of electricity cause adhesions.

In conclusion, DR. SMITH said that although at present the tide of surgery is in its full flow, the time will yet come when electricity will find an honorable place in the treatment of women who wish to keep their ovaries.—*N. J. Med. Rev.*

Pregnancy and Operations on the Appendages.

DELAGENIERE of Le Mans has performed three operations for diseases of the appendages in pregnant women, and all were afterwards delivered at term. In Case I the patient was three months pregnant, and was seized with symptoms of peritonitis. After the symptoms subsided a tumour was discovered. An operation was performed; an adherent ovarian cyst with twisted pedicle was discovered and removed. In Case III an ovarian dermoid was removed at the fifth month as it had grown very large. In the second case there was disease of the tube and ovary on both sides, and the patient at the fifth month was exhausted from pain. The abdomen was very tender. The appendages adhered to the uterus, and the intestines around them were also adherent. Both tubes and ovaries were removed. There was great trouble during convalescence owing to constipation. The patient was afterwards delivered at term, of a healthy infant. A few hours later she felt severe pain close to the right side of the uterus, and there was nausea with pallor. All the trouble passed away at the end of an hour. A year later the patient was in excellent health. HENRI DELAGENIERE concludes that pregnancy need never modify the indication to operate. It is a complication of the existing disease, rendering operation all the more necessary, if not urgent.—*Brit. Med. Journ.*

Indications for Total Hysterectomy.

DR. AUGUSTUS P. CLARKE, of Cambridge, Mass., regards as the principal indications for a total hysterectomy: Cases in which the uterus may be in a position opposite to that of prolapse, and in such a state of immobility, superinduced by previous inflammatory processes affecting the adnexa, and producing such adhesions of these parts, as to necessitate, for

relief, operative interference. In cases of rapidly growing interstitial fibroids, or large suppurating growths developing from a broad, sessile base. In such cases the operation is indicated not only because of the hemorrhage, but also because of the pressure which may take place upon the surrounding parts, and the destruction it may produce in the vascular tissues in the abdominal and pelvic organs. If a large and rapidly growing fibroid should take on a retrograde process, either spontaneously or otherwise, the morbid growth may afford a culture-chamber into which other disease cells may find their way, and then undergo malignant degeneration. In such a condition, total hysterectomy is the only expedient that will afford a complete and permanent cure. If sarcoma is suspected in any part of the uterine system, it should be an indication for action. Total hysterectomy is absolutely necessary for uncontrollable prolapse, if anterior and posterior colporrhaphy and other plastic operations have been repeatedly tried and have failed to produce permanent relief. It is the only safe and surgical expedient to be adopted in cases of hemorrhagic polypi which present suspicious microscopical appearances after removal. It is called for in ectopic pregnancy; in such cases hemorrhage can be more safely controlled and the patient is enabled to make a more rapid recovery than by the other methods of procedure. It should be undertaken in ovarian disease, in pyosalpinx, and in old inflammation of the appendages. It should be resorted to in all suspicious disease of the adnexa, and in cases of large cysts, as well as in papillomatous developments and otherwise irremovable cysts and intra-ligamentous fibroids and tumours of the broad ligament. *Med. News.*

After-Histories of Removal of Diseased Appendages.

PINESSE has traced 136 out of 268 patients who had been operated upon by LUCAS-CHAMPIONNIERE, both appendages being removed for inflammatory diseases of the tubes and ovaries. The 136 only include after-histories of over one year, the majority being of two years', and a few of five or six years' standing. In only 8 per cent. did abdominal pain persist. It is significant that the pyosalpinx cases gave the best results, the pains felt before operation always ceasing. Persistence of the pain seems to be neurotic. On the other hand, the catamenia persisted in 22 per cent. of the cases, pyosalpinx being the most frequently (50 per cent.) followed by this phenomenon. In the least advanced cases of inflammatory disease subjected to the operation in question, the period ceased in almost every instance. Persistence of the menses is undoubtedly due, as might be expected, to the leaving behind of portions of ovarian tissue. This has been proved in second operations, where corpora lutea were seen on the stump of the old pedicle. In itself, however, partial or occasional irregular menstruation is rather favorable to the health of young patients: The inflamed structures being removed, they can no more give pain and acquire adhesions to viscera, whilst the gradual suppression of the period is less likely to shock the nervous system of a young patient than its total cessation. PINESSE has never seen insanity follow the operation, nor is obesity the rule. All nervous symptoms are to be attributed to the artificial menopause. Vaginismus developed after operation in a few cases, and one patient suffered from contraction of both hands. Both these symptoms seem to be neurotic.—*B. M. J.*

Intractable Galactorrhœa.

VAN TUSSENBROEK describes an unusually bad case in which this troublesome disorder followed an abortion at the fifth month in a primipara. Emaciation set in, and, as no therapeutic measures were of any avail, the mammae were amputated. Microscopic examination did not explain more than might be expected, the glandular tissue being in a very active condition.—*B. M. J.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Composition of Human Milk.

AXEL JOHANNESSEN has made researches on the milk of twenty-five women from 20 to 46 years of age, in the different periods of lactation, from the first to the thirteenth month after delivery. The specimens of milk were taken from both breasts either before or after the child had nursed, under given dietetic conditions, the food being weighed and measured with exactitude. The total quantity of albumin, casein, and globulin averaged 1.104 per cent., varying but little from this figure; the quantity of fatty matters varied from 0.63 to 6.68 per cent., with an average of 8.21 per cent.; sugar, from 2.55 to 9.77 per cent., the average being 4.67 per cent. The specific gravity of milk was in inverse proportion to the quantity of fatty matter; analysis made at different hours of the same day often shewed a notable difference, especially in the fatty constituents, which were much greater immediately after the child had nursed than before, while the quantity of sugar and albumin remained about the same. In the early months of lactation the amount of albumin was greater than later on. The food exercised a great influence on the milk; an abundant diet caused it to be rich in albumin and fatty matters, while a preponderance of amylaceous food made it poor in albumin and sugar, but rich in fatty matters.—*SAJOUS. Univ. Med. Jour.*

The Influence of the Nervous System on Absorption.

LEUBUSCHER and TECKENBURG publish in brief the results of fresh experiments and of new trials of older ones which appeared in detail in Teckenburg's inaugural dissertation, Jena, 1894. These results are as follows:—

1. GOLTZ' opinion, that after destruction of brain and spinal cord the vascular tonicity is increased, so that a frog loses only a few drops of blood from the opened aorta, is insufficient to account for his observation on the loss of blood in the operation.

2. A short time after severing the nerves of one extremity there was seen in that extremity a dilatation of the vessels, slowing of the blood current and, as a consequence, delayed absorption. This disturbance was compensated after a short time.

3 and 4. If coils of empty intestines are exposed and the corresponding nerves in the mesentery are severed, fluid collects within the coils, pale and clear, alkaline, unaffected by heat, and acting in no way upon albumin or starch. The fluid must therefore be a transudation from the blood, not a secretion from the intestinal mucous membrane. Half as much iodide of potash (in solution) is absorbed from the intestinal coil whose nerve supply is cut off, as from a coil of equal length with full nerve connection. In the jejunum more is absorbed than in the ileum.

5. Dogs in whom the large abdominal ganglia were extirpated, shewed after the operation depression, diarrhoea, and later, (despite feeding) an emaciation, which was overcome slowly, seven to eight weeks after the operation. The urine meanwhile shewed an acid reaction, as in starvation of herbivora. Sugar was never found, traces of albumin, often small quantities of blood rarely.—*Med. News.*

The Pathology of the Pancreas.

It is only within comparatively recent years that any notable additions have been made to our knowledge of the pathology of diseases of the pancreas. A decided impetus was given to the subject by the epoch-making researches

of FITZ, who practically established upon a firm clinical basis the symptomatology and diagnosis of acute pancreatitis and allied conditions. Of the etiology of these we practically know nothing, and this line of research affords a field for investigation that promises to yield important and interesting results.

Recent clinical and experimental observations have shown that some lesions of the pancreas are attended with glycosuria, but an even more obscure association is that with the peculiar condition known as fat-necrosis. While this has been observed most commonly in connection with pancreatic disease, it has also been found in some cases in which such disease could not be demonstrated. An interesting contribution to this subject has recently been made by HILDEBRAND who, in a series of experimental observations on cats, succeeded in inducing fat-necrosis by ligation of the pancreas or its vessels, and by transplantation of the organ in whole or in part. In two animals the pancreas alone was ligated; in six others ligatures were also applied to all of the veins. Sugar was found in the urine of one of these. In one instance a bit of pancreas, two by three centimeters, was excised from the continuity of the organ and fixed with a suture in the omentum of another animal; and, again, an entire pancreas was treated in the same way. In another experiment a whole pancreas was scarified and made to surround a portion of the small intestine. The animals withstood the operations well, but in all the characteristic white areas of fat-necrosis appeared in the peritoneum comparable to that observed in man.—*Journ. Amer. Med. Assoc.*

The Microbes of the Eye.

THE researches of bacteriologists have shewn that the conjunctival sac is a famous feeding-ground for microbes of all kinds. A very complete and learned review of the question by Dr. A. CUENOD shews the present status of the subject and indicates that, in time, all inflammatory conditions of the conjunctiva will be distinguished nosologically by their specific microbes rather than by the vascular reactions. Thus he shews that the acute catarrhal inflammations are due sometimes to the bacillus of WEEKS and more rarely to a pneumococcus or streptococcus organism. The purulent conjunctivitis of genital origin is usually due to the gonococcus. Croupous conjunctivitis may be due to the bacillus of LOEFFLER, but is often a mixed infection.

In chronic inflammatory conditions there have been found the trachomacoccus (KOCH, PONCET, MICHEL), the gonococcus, and a microsporon described by Nofsewski. In xerosis, the bacillus of pseudo-diphtheria is present. The bacilli of tuberculosis and of lupus also may develop in the conjunctiva.

According to CUENOD, in the healthy conjunctival sac one never finds the microbes characteristic of the three principal forms of acute conjunctival inflammation (blepharitic, diphtheritic, and contagious catarrhal). Only exceptionally does one meet with staphylococci, streptococci, and pneumococci. The conjunctiva is, therefore, reasonably aseptic in healthy eyes. The constant flow of lachrymal fluid across its surface is believed to have some antiseptic influence.—*N. Y. Med. Rec.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The Transportation of the Dead in America.

THE *Journal of the American Public Health Association* publishes a paper on the innocuous transportation of the dead, by Dr. J. D. GRIFFITH, in which he remarks: "Until

we are educated to the point of the thorough sanitation of cremation, the transportation of dead bodies by railway is, and always will be, a source of danger." This danger, however, we are happy to think, does not threaten our own country in the same degree as it does America, where dead bodies are quite commonly put in baggage cars along with, perhaps, twenty or thirty trunks. It is clear that if the person has died from an infectious disease and the coffin is not hermetically sealed, the luggage may become infected, and by its distribution could prove the cause of wide-spreading mischief. Not only this, but the health of the railway employees is menaced. In 1888 the National Association of General Baggage Agents, including most, if not all, of the main carriers of the United States, adopted a schedule of rules and forms to govern the transportation of corpses, in which it was suggested that a corpse should be wrapped in a sheet saturated with a strong solution of bichloride of mercury and packed in a specified casket. The writer gives it as his opinion that many dangerous maladies have been spread by handling and shipping the dead body, and believes that the whole country must have benefited from these rules, as most of the State boards of health have not only approved, but adopted them with little or no modification. It has been suggested that in all cases where a death occurs from an infectious disease the body should be interred in the same neighbourhood where the death takes place; but, as Dr. GRIFFITH points out, endless trouble might follow with many people who would leave no stone unturned to enable them to remove the body if they so desired. This being so, the only practical suggestion seems to be that a portion of the baggage car should be provided with metal-lined compartments and be used exclusively for the purpose of conveying dead bodies from one place to another. By this means the risk of infection would be considerably minimised, both to the employees of railways and the travellers who entrust their trunks to the care of the railroad companies.—*Lancet.*

Measures for the improvement of Vaccine Lymph.

DR. S. W. ABBOTT says:—In summing up this phase of the subject, I believe that improvement may be made in the production of vaccine lymph in this country by the adoption of the following general and special measures:

1. Cultivation and production of vaccine lymph by the United States Government for the use of the Army, the Navy, and the Marine Hospital Service, and for all public institutions managed by the Government.

Each State to produce its own lymph for the use of its public institutions and for the use of all local boards of health of cities and towns.

2. The abolition of agents and middlemen, and the issuing of lymph directly from the producers to the parties who use it, every package to be stamped with the date of its collection.

3. The employment of better and more uniform methods of inoculating animals.

4. The exclusive use of animals less than one year old.

5. Limiting the time of collecting of lymph to a period of five days, or at the outside to six days from the date of its insertion.

6. The adoption of careful rules for every establishment relative to cleanliness, the care of animals, etc.

7. If adult animals are used, a requirement that they shall be slaughtered before the lymph is issued.—*Boston Med. and Surg. Journ.*

Revaccination and its Effects.

M. HERVIEUX informs us that for the past seven weeks not a single case of small-pox has been reported in Paris. Not since fifteen years ago has such a phenomenon been noted, and this satisfactory condition of affairs contrasts strongly with what obtained about the same time last year. To what may be attributed this happy state of things? M. Hervieux answers unhesitatingly: to the wholesale revaccination practised through the initial aid of Dr. MARTIN, Inspector-General de l'Assainissement. The Academy of Medicine can also claim some credit for its vaccinating department supplied large numbers of tubes and organised extra vaccinating seasons. Such a brilliant result could not, says M. HERVIEUX, have been attained had human, instead of calf lymph been used.—*Lancet*.

Sewage Purification by Polarite.

THE chemical report of M. L. VUAFLEART and the micro-biological report of Dr. BILLET relating to the experiments made at the Exhibition at Boulogne, with Mr. ANDREW HOWATSON'S installation for the treatment of sewage by polarite, are now published. The reports are highly interesting, shewing the experiments to have been carried out with the greatest care, the results being most satisfactory.

M. VUAFLEART arrives at the conclusions that the effluent was at all times limpid and colorless, and that in addition to the organic matter in suspension, from 84 to 88 per cent. of that in solution was removed.

Dr. BILLET'S micro-biological report concludes thus:—

- (1.) Crude sewage 5,250,000 microbes per centimetre cube.
- (2.) Crude sewage after precipitation by Ferozone, 812,500 microbes per centimetre cube.
- (3.) Crude sewage after filtration through polarite, 42,000 microbes per centimetre cube. That is to say a little more than 99 per cent. of the microbes were removed:—*Sanitary Record*.

Barbers and Hair-dressers.

DERMATOLOGISTS and hygienists are agreed that certain diseases are transmitted through the instruments of barbers and hair-dressers. This necessitates the frequent washing and disinfecting of all appliances used by these people, especially before using them again. Carbolic acid will certainly kill the microbes, but its disagreeable odor is hardly the thing in a hair-dressing establishment especially where perfumery is sold. Boiling water is liable to rust the instruments. BLAISE recommends as the best disinfectant to dissolve 10 parts of carbonate of potash or soda in 100 parts of hot water. The instruments come out of this bath in a polished and defatted condition. The essential oils can be utilized; many of them possess well-established bactericidal properties. There are also benzoic acid, thynic acid and creoline, whose antiseptic properties are acknowledged. A sterilizer would be the proper apparatus for all barber shops and hair-dressing parlors.—*Pacific Med. Journ.*

—:O:—

THERAPEUTICS AND PHARMACOLOGY.

The Treatment of Ozena.

MACKENZIE has reported the case of a young lady with a foetid discharge from the nose. The teeth were found sound but it was recognised that ozena was present; large putrid crusts blocked the nares, and when removed were replaced by others. The nose was broadened and the alae were thickened and reddened. In the belief that ozena is a disease of

the mucous membrane, and that the atrophy of sinuses which is characteristic of it is simply due to the pressure of the hardened pus (crusts) upon that membrane, a condition somewhat analogous to that met with in the skin in certain forms of eczema, an attempt was made by excoriation to supplant the diseased membrane by new tissue. After cauterising, oily applications, such as a mixture of ichthyol and olive-oil, were found soothing and beneficial. The treatment was continued during the summer and part of the autumn, and resulted in recovery, which was persistent after four years. Similar treatment has likewise proved successful in several other instances.—*Brit. Med. Journ.*

Splenic Extract in Malarial Cachexia.

Dr. G. COUSIN relates two cases of malaria with considerable swelling of the spleen, that had proved obstinate to the ordinary means of treatment. He then resorted—and successfully—to subcutaneous injections of splenic extract obtained from a fresh sheep's spleen, filtered and sterilized in d'Arsonval's apparatus. He commenced with an injection of 1 gms. (15 min.) of this extract, and gradually increased the dose to 8 to 10 grammes (2 to 2½ fl. dr.). These daily injections often immediately effected an increase in the quantity of urine voided, and sometimes they provoked rather abundant perspiration or a slight rise of temperature, locally, they thrice gave rise to thick, indurated nodules (like hazel-nuts). Their therapeutic effect was promptly manifested, it is stated, by a diminution in the size of the spleen, disappearance of the pain due to the swelling of this organ, recovery of appetite and strength, increase in body weight and in the number of erythrocytes.

After about 35 injections, both patients were considered cured (*La Sen. Méd.*)

Antistreptococci Serum in Puerperal Septicæmia.

JACQUOT communicated to the Société de Biologie the case of a woman attacked by puerperal septicæmia in which intra-uterine injections and quinine were without effect. The symptoms persisted and the evening temperature reached 40.8° C. He then injected 30 c.cm. of ROGER and CHABRIN'S antistreptococci serum. The same evening the temperature fell to 37° C. After three injections of the serum the patient seemed well, when, three days later, her mother contracted facial erysipelas. This seemed to be the origin of a new infection, for in two days the convalescent had a severe rigor and the temperature again rose to 40° C. Only one other injection of the serum, however, was required to arrest the process, and there was no further relapse. JACQUOT remarks that this case, while showing the favourable action of the serum in puerperal septicæmia, and notably on the temperature, further illustrates the reciprocal relationship which exists between this disease and erysipelas.—*B. M. J.*

Cannabis Indica.

MACKENZIE speaks of cannabis in all forms of cephalalgia. He has found it act favorably even in the severe headache attending cerebral growths. In chronic uræmia, where opium is contra-indicated, it is especially serviceable. He has found the remedy to be almost a specific for that continuous form of headache which begins in the morning and lasts all day. In these cases the pain is generally dull and diffuse, but marked by occasional exacerbations. While it is rarely severe enough to interfere with occupation, yet it constitutes a source of constant annoyance to the patient. In such cases the author administers morning and evening from one-twelfth to one-half grain of the extract in pills. If these doses are not sufficient, he

give one grain in the evening and one-half grain in the morning. In very obstinate cases the dose is still further increased, the larger dose always being taken in the evening, until relief is afforded, or toxic symptoms become manifest. In some instances MacKenzie combines gentian, cinchona, or hydnocarpin of caffeine with the cannabis indica. In various neuralgic affections, gastralgia, the pains of tabes the drug often proves very useful.

In skin-diseases associated with intense itching, particularly scutic pruritus, where local applications fail to relieve, cannabis indica is often used with great benefit. The author has rarely observed any untoward effects from its use, nevertheless, to avoid toxic manifestations, the drug should be given at first in small doses, the latter being gradually increased.

Correspondence.

THE "INDIAN MEDICAL RECORD" ON THE OPIUM QUESTION.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—As one who has sympathized thoroughly with the views always expressed so fearlessly by the *Record* on the Opium Question, and as one who is and has always been in accord with your views, I would congratulate you on the excellent editorial on this subject which appeared in your 16th July number. I have read that article critically and wish to point out some errors in it, which may be due to incorrect type-setting or incorrect copying of figures. I think your article will be greatly strengthened in point and value if you will kindly publish the following corrections. The figures—your figures—are based on the Sanitary Commissioner's Report I presume, and it is from that volume that I am suggesting the corrections to your article.

I trust you will take my intentions in a good spirit, as I feel your hands can only be strengthened by the publication of the following note:—

1. Page 48, 2nd column, 14th line, from bottom the word "opinion" should be *opinions*.
2. Page 49, twelfth line, from para. beginning "Distribution, and prevalence &c.," the word "*habits*" should be *habit*.
3. Page 51, first column, 14th line, from end of para. "the far-fetched" should be "*than far-fetched*."
4. Page 52, sixth line, 1st column, after "a low average," add of consumption: *but the highest malarial mortality in Bengal, as will be seen from the following table.*
5. Omit list of districts after "average" substituting the attached Table I.
6. After list of districts page 52, omit first sentence, from "*In first six districts, &c.*," to "*Moorshedabad*,"—four lines altogether.
7. Correct figures in 22nd line from the bottom, page 52, first column, " $1,106 \times 30 \times 365 \times 12,110 \times 700$ " which should be as follows:— $1,106 \times 30 \times 365 = 12,110,700$.
8. Page 52, 19th line, from bottom of first column, "*11,000*" should be *110,000*.
9. Page 52, first column 19th line, from bottom, the words "*we could not*" should be *we would now*.

10. Page 52, second column, 31st line, from bottom after sentence insert:

11. Page 52, first column, 18th line, from the top for "*Dinajpur and Rajshaye*" substitute *Rajshaye and Jessore*.

12. And in the line which follows—"Show together only 1'38" read—"Show 13'9 and 7'3 respectively."

13. Page 53, first column, 26th line, from bottom the word "lead" should be *lead*.

14. Page 53, first column, 2nd line, below "lead" the word "narcotine" should be *amarcotic*, also the same corrections in 9th line from bottom; and in 2nd and 9th lines from top of second column, page 53.

15. Delete after anarcotine in 9th line.

16. Page 53, 2nd column, 17th line, from top the "or" should be *in*.

Table I showing the annual mortality from malarial fevers; and the average consumption of licit opium per head per annum, in the nine most malarious districts of Bengal:

| Name of District. | Average mortality per annum per 1,000 of population. | Average consumption of licit opium per head per annum. |
|-------------------|------------------------------------------------------|--------------------------------------------------------|
| | | Grains. |
| Rajshaye | 35.48 | 13.8 |
| Jessore | 33.73 | 7.8 |
| Maldah | 33.28 | 33.9 (1) |
| Moorshedabad | 30.85 | 28.5 (2) |
| Dinajpur | 29.41 | 14.4 |
| Jalpalgouri | 29.41 | 6 |
| Naldea | 28.99 | 10.9 |
| Darjeeling | 27.12 | 15.7 |
| Rangpur | 26.11 | 20.6 (20.6) |
| Dacca | 16.81 | 5.1 |
| Maimensing | 16.83 | 5.8 |

(1) In Maldah the excessive consumption is largely due to *madak* smoking, there are 28 shops in the district.

(2) Including the city of Moorshedabad, which raises considerably the average for the whole district.

Yours, &c., D. MORISON,

—:O:—

SNAKE-POISONS AND "ANTIVENENE."

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—As much interest is evinced by the public in the vitally interesting question of snake poison, and researches are being made in various parts of the world with the object of discovering an antidote, I venture to offer a few remarks on the subject. On inquiry it will be found that many scientific and experimental truths which modern scientists think they have discovered were not unknown to the ancient sages of India six hundred years before the birth of Christ. The abstract of a paper noticed editorially in your columns on the antidotal properties of the blood serum of animals immunised against snake venom, shews how animals can be protected from snake or other venoms by injecting into them the blood serum of animals that have been made immune against doses of the same or similar venoms. It is further shewn that snake poison is rendered innocuous by being mixed with a weak solution of chloride of gold or hypochloride of lime. That this effect of gold as a curative and a preventive of snake or other poisons was known to the inspired sages of ancient

India is clearly proved by the following translation of *Charaka*, v. v. 186, and 187, c. 25, and *Visha Chikitsahetum Chikitsahasthanam*:—"Finding the patient with symptoms of poison, the learned physician will inquire if he has taken anything particular at any time and immediately cause him to vomit out with copper-powder and honey to clear his stomach. Then he will give the patient a dose of gold-powder (chemically prepared) of half a *tollah*, as it cures poison of all sorts, whether venomous snake poison, metal poison, or poison of herbs; and the poison can no longer remain in the system, just as water cannot stand on lotus leaves." Although the ancients did not bring in to light such a process as injecting the serum of blood of an immunised animal, the fact that they appreciated the efficacy of administering to the patient the blood of venomous snake that had bitten him is clear from verse 191 of the same treatise, which foreshadows in a distant and indirect way the result of Professor FRASER'S experiments, by advising the patient bitten by a snake, or other venomous creature, to bite it immediately and suck its body, the substance so sucked out being applied with saliva to the wound as a means of neutralising the poison. On a reference to the *Bagbhatgita*, c. 38. v. 17, further information on this point may be gathered. That this is undoubtedly a rough way of injection with blood serum may be safely inferred from the texts to which I have referred. Hypochloride of lime may in like manner be compared to *kharaqud* (lime-drug) which, though consisting of several ingredients, contains *khas* (lime) chiefly. (*Charaka*, c. 25., v. v. 35 and 62.) The fact that the deadly poison could be rendered innocuous by inoculating the person bitten with the blood of birds that had been rendered immune was also known to the ancient sages, as will be found in v. 192 of the same chapter, which enjoins that ducks, swans, peacocks, etc., should be reared for the purpose of making them available when required to avert the poison by their contact. The utility of this process has been testified more than once. The *Charaka* deals with numerous ways of treatment and different sorts of medicines for curing snake poison, which may be summarised as follows: (1) The binding process (to stop the circulation); (2) the process of burning and causing blood to flow from the wound; (3) the process of sucking the wound; and (4) the application of medicines (both internal and external). The great treatise also accepts *Sirish* (*Albizzia* *labeles*. Syn. *Acacia labelee* or *Acacia Sirish*) as the best of medicines derived from herbs to avert death from poison. It further affirms that, on the failure of all other medicines, the physician should use metal or vegetable poison in fighting that of the snake, as these have an inverse power of neutralising the deadly effect of each other (*Charaka*, c. 25, v. v. 39 and 12). The *Tantras* also have descriptions of many efficacious medicines for curing snake poison. It is to be hoped that such valuable information as I have cited may be collected together in a compact form and submitted to the ordeal of careful experiment, so that many useful and efficacious antidotes for snake poison may be available to the scientific world.—
Yours, &c.

LALIT KUMAR GUPTA, *Kabiraj*.

CALCUTTA, July 16th 1895.

THE COUNTERSIGNING OF THE MEDICAL CERTIFICATES OF PRIVATE PRACTITIONERS BY GOVERNMENT DOCTORS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Your indignant but just protest against the calumny hurled by a non-descript writer in the lay press, who disgustingly calls himself a member of our profession, was not a bit too soon needed. Evidently the Calcutta public has taken its cue from our sycophantic villifier, and acting upon the supposition that his statement is true, "that with private practitioners the question of medical certificates is simply a matter of fees," a somewhat respectable member of Calcutta society sent me the following insidious letter:—

"Dear Sir,—Excuse me for writing in the strain I am doing, but as the case is an urgent one, I trust you will overlook my presumption and grant the request.

A lady friend of mine is summoned to appear at the Small Cause Court on Monday the 22nd instant, but wishes to have a medical certificate, shewing her inability to attend on the day appointed. Of course, I need not inform you that the lady in question is not indisposed in any way, but leaves the nature of her complaint entirely in your hands.

Should you feel disposed to grant the favor, please let me know your fee for the above certificate.

In any case should you accede, or refuse the request, please say nothing about this letter to any one, although the complainant in the case may try and worm the facts of the case out of you, being a regular patient of yours.

Sincerely hoping you will not refuse, and thanking you in anticipation for the same. An answer, per bearer, will oblige."

CALCUTTA, July 20.

Yours &c., J. A."

To the above epistle I sent the following reply:—

Dear Sir,—I am surprised at your request and assure you most emphatically that I do not believe that any physician could but feel offended at such a letter, for you simply ask a doctor to certify to a falsehood and offer him a fee for doing so."

As I send you the original letter sent by the applicant, who could easily have been prosecuted under the Penal Code, I trust it will be clear to the detractors of the local profession that we are not guilty of the faults and misdemeanors which such cringing perversers of the truth as *Medico* would have the lay public believe.

Yours &c., L.R.C.P. & S. (Edin.)

REVIEW.

LEPROSY: in its clinical and pathological aspects. By DR. G. ARMAUER HANSEN, Inspector-General of Leprosy in Norway, and DR. CARL LOOFT, Assistant Physician to the Lunge-gaards Hospital. Translated by NORMAN WALKER, M.D., F.R.C.P., Edin., Assistant Physician for Dermatology, Edinburgh Royal Infirmary. With numerous photographs and colored plates. Bristol: JOHN WRIGHT & Co., Pp. 162. Price 10 s 6 d net.

This splendid monograph on leprosy from the pen of two of the most experienced experts in dermatology will, to a certainty, be welcomed by the profession, for while *acanthosis scrophulæ* prevails to a very large extent, it is true, still the treatise before us is not in any wise a redundancy in the matter of works on leprosy. The

authors say. "We hope to be able to lay before experts a thorough, complete, and instructive demonstration, the more as we do not base our views, as has been frequently and unfortunately done, on any single or scattered observations." This desire is most thoroughly and faithfully carried out in their conjoint work on leprosy. The translator, DR. NORMAN WALKER, has completed his task with assiduity, carefulness and absolute accuracy. There are of course, many points on which there is much divergence of opinion. For example HANSEN's view of the position of the bacilli in the cells, which is extensively held, is strongly opposed by UNNA &c.

The chapter on treatment has been wholly re-written for this edition, and is a résumé of DANIELSSON's views. In this connection we may venture to remark that any new drug or method of cure, which, after a fairly extended trial, could be pronounced efficacious, even temporarily, would be hailed with a joyous welcome. With this end in view, we made a scrutinizing search among the pages of the erudite treatise before us to see if it could shed any ray of hope, or recommend any medication or method of treating this fell disease other than those already in vogue—but in vain—Of the 25 remedies enumerated, that have been tried, with more or less success in the hands of some physicians, *not a single one* can be relied upon. *Re* the curability of leprosy during its incipient stage, the authors say: "we have seen cases of leprosy, in the country (Norway), both tuberculous and maculo-anæsthetic, completely recover *without any treatment whatever*." The only alternative is *prevention* by means of segregation and isolation in properly constructed asylums. This has been the means of reducing the number of lepers in Norway from 1833 cases in 1856 to 950 cases at the end of 1890.

Regarding the inoculability of leprosy to lower animals, the authors remark, "unfortunately, all attempts to inoculate animals *have failed*."

Referring to "*The Recrudescence of Leprosy, and its Causation*," by WILLIAM TERR, the authors likewise consider that distinct proofs of Mr. TERR's contention that leprosy may be conveyed by vaccination from arm to arm are wanting.

No reference is made to the recent Indian Leprosy Commission, as DR. HANSEN has published his views thereon in the *Lancet* of October, 1893.

The work is divided into 8 chapters, which are devoted to a description of the two forms of Leprosy, the structure of the Leproma, Pathology, Diagnosis, Prognosis, Etiology and Treatment of the disease. There are 4 "Plates," or *photo-tints* illustrating patients suffering from the two forms of leprosy, and at the end of the work, 8 beautifully tinted chromo-lithographs of pathological microscopic specimens shewing lepra bacilli and globi.

Altogether the work is a compendium of the most recent research and investigation into the nature and treatment of that very scourge of diseases—Leprosy. The authors have brought together the latest advances made by Scientists in the consideration of this disease as treated in the Langesgaards Hospital in Norway, which will be of great value to the busy practitioner and the aspiring student. The letter-press is easily and comfortably readable, thanks to the publishers, Messrs. John Wright & Co., of Bristol.

Government Medical Gazette.

GOVERNMENT OF INDIA.

The services of Surgn.-Capt. H. B. Melville, M.B., C.M., I.M.S., (Bengal), are replaced temply. at disposal of Mily. Dept.

The priv. leave for two months granted to Surgn.-Maj. J. Crofts, M.D., I.M.S. (Bengal), is extended by fourteen days.

Surgn. Maj. Neilson, M.B., I.M.S. (Madras), resumed med. charge of Ulwar Agency on 3rd instant.

Second grade Hosp. Asst. Narinjan Das, attached to 32nd Bengal Infy (Pioneers), is, in recognition of good service rendered by him during advance of Gilgit Force to relief of Chitral, especially promoted to be an Hosp. Asst. of first grade, from 18th April, subject to his passing necessary exam for promotion within twelve months of that date.

The services of undermentioned med. offrs. of Bengal Estab. are placed permanently at disposal of Govt. of N.-W.-P. and Oudh:—Surgn.-Capt. C. O. Manifold; Surgn. Maj. G. M. J. Giles, M.B., F.R.C.S., Surgn.-Capt. J. M. Crawford, M.B., C.M.

Second class Asst. Surgn. Joseph Benson Farrell to be first class Asst. Surgn.

Third class Asst. Surgn. Francis Hubert Dean Netscher to be second class Asst. Surgn. from the 19th March, *vice* first class Asst. Surgn. John Alexander Judd, retired.

Second class Asst. Surgn. Julius Augustus Lobo to be first class Asst. Surgn.

Third class Asst. Surgn. Louis Joseph DeSouza to be second class Asst. Surgn. from the 20th, *vice* first class Asst. Surgn. Santana Caridade Saldanha, retired.

Samuel Arthur Powell, Gentleman, to be Surgn.-Lieut. from the 2nd April, *vice* Dundee, resigned.

Surgn.-Capt. T. W. Shaw, M.B., Indian Med. Service (Bombay), Med. Offr. of 1st Regiment, Central India Horse is apptd. to be Med. Offr. of Western Malwa Political Agency, in addition to his other duties.

Surgn.-Capt. H. B. Melville, M.B., I.M.S. (Bengal), is apptd. to med. charge of Bundelkhand Political Agency, in addition to his mily. duties, 9th June.

Senior Asst. Surgn. with honorary rank of Surgn.-Lieut. Daniel O'Leary to be Senior Asst. Surgn. with honorary rank of Surgn.-Capt.

First class Asst. Surgn. Henry Hawkes to be Senior Asst. Surgn. with honorary rank of Surgn.-Lieut. with from 12th March *vice* Senior Asst. Surgn. and honorary Surgn.-Capt. George Albert Watts, retired.

BENGAL GOVERNMENT.

Surgn.-Capt. F. P. Maynard, Offg. Roadt Physician, Med. Coll. Hosp. and Professor of Pathology, Med. Coll. Calcutta, is allowed priv. leave for thirty days, from 21st June.

Surgn. Lieut.-Col. C. J. W. Meadows made over charge of Burdwan Jail to Surgn.-Capt. J. C. S. Vaughan on 5th July.

Babu Sheo Nandan Lal Roy, Deputy Magistrate and Depy. Colltr. held executive charge of Bankipore Jail, during absence of Brig.-Surgn. Lieut.-Col. F. C. Nicholson, from 20th May to 2nd June.

Asst. Surgn. Suresh Chandra Bannerjee is apptd. to do superny. duty at Med. Coll. Hosp., Calcutta, until further orders, from 3rd July.

Asst. Surgn. Jogendra Nath Bose is apptd. to do supy. duty at Med. Coll. Hosp., Calcutta, until further orders or ders from 4th July.

Asst. Surgn. Mohendro Nath Dutt is apptd. to do superny. duty at Med. Coll. Hosp., Calcutta, until further orders, from 23rd June.

Asst. Surgn. Lohit Mohun Laha, a superny. at Med. Coll. Hosp., is allowed leave for two months and 15 days.

Asst. Surgn. Bana Mali Roy is apptd. as House Surgn. in First Surgn's Ward of the Med. Coll. Hosp., Calcutta, *vice* Asst. Surgn. Bhogobutty Kumar Chowdhuri, transferred.

Asst. Surgn. Bhogobutty Kumar Chowdhuri, House Surgn. in First Surgeon's Ward of Med. Coll. Hosp. is apptd. to do superny. duty in that institution until further orders.

Surgn.-Maj. to be Surgn.-Lieut.-Col. from 31st March :—
Robert Davidson Murray, Denise Wool Denise Comins.
Bederick Maerua.

To be Surgn.-Maj.—Surgn.-Capt. Granville Jameson.
Dated 31st March.

Surgn.-Lieut.-Col. to be Brig. Surgn. Lieut. Col. 1st April.
Charles John Walferd Meadows, *vice* Brig. Surgn. Lieut. Col.
A. Cameron M. D., retired.

Surgn. Capt. F. C. Clarkson, Offg. Civil Surgn. of Nadia,
allowed leave for 2 months and 24 days from the 18th July.

Asst. Surgn. Brojo Nath Choudhry of the Diamond Harbour
Subdivision and Disp. is allowed leave for two months.

Asst. Surgn. Khirode Chandra Chaudhuri is apptd. to have
temp. med. charge of Subdivision and Disp. at Diamond
Harbour in the 24-Parganas Dist., during the absence on
leave of Asst. Surgn. Brojo Nath Choudhry.

Dr. J. L. Hendley made over charge of Jalpaiguri Jail to
Babu Denonath De on 8th July.

PUNJAB GOVERNMENT.

Asst. Surgn. Mehr Chand (II.) Rai Bahadur, in charge of
Amritsar Civil Hosp., is apptd. to offic. as Civil Surgn.
of Shahpur, from 7th June, *vice* Mily. Asst. Surgn. W.
Marchant, transferred to Mooltan.

Surgn.-Maj. C. J. Bamber, Civil Surgn., Rawalpindi, has
obtained priv. leave of absence for one month from 24th
June.

Asst. Surgn. Bhagwan Das (II.), in charge of Civil Hosp.,
Rawalpindi, is apptd. to offic. as Civil Surgn. of Rawal-
pindi, in addition to his other duties, from 24th June during
absence on leave of Surgn.-Maj. C. J. Bamber.

The services of Asst. Surgn. A. Williams, doing general
duty at Mayo Hosp., Lahore, are placed temp. at disposal
of Govt. of India in Foreign Dept., from 24th of June.

Mr. A. Williams, Asst. Surgn., 3rd grade, in Punjab, is
apptd. to offic. as Resy. Surgn. in Nepal, from date of
assuming charge, and during absence on priv. leave of
Surgn.-Capt. W. E. A. Armstrong.

Asst. Surgn. Bure Khan, from N.-W. Railway Hosp.,
Lala Musa, to Kasur Disp., Lahore Dist., which he joined
on 31st June, relieving 1st class Hosp. Asst. Amir Shah
retransferred to Mayo Hosp., Lahore, for genl. duty.

On return from leave, 3rd class Hosp. Asst. Ganesh Das
reported himself to the Civil Surgn., Hoshiarpur, on 26th
June for genl. duty.

On return from leave, 3rd class Hosp. Asst. Abdul Rahman
Khan, reported himself to Civil Surgn., Amritsar, on 28th
June for genl. duty.

On return from leave, 3rd Class Hosp. Asst. Hari Chand
reported himself to Civil Surgn., Delhi, on 26th June for
genl. duty.

Surgn.-Maj. G. F. Nicholson, Med. Adviser to His High-
ness Raja of Jind, has obtained priv. leave of absence for
three months, from 18th of June.

Dr. D. N. P. Datta, Civil Surgn., Hoshiarpur, has obtained
priv. leave of absence for three months, from 1st of July.

Asst. Surgn. Atar Chand, Hoshiarpur Disp., is apptd. to
offic. as Civil Surgn. of Hoshiarpur, in addition to his other
duties, from 1st of July, *vice* Dr. D. N. P. Datta.

Asst. Surgn. Thakur Das, Rai Bahadur, is apptd. to offic.
as Civil Surgn. of Gujrawala, from 2nd of July, *vice* Mily.
Asst. Surgn. J. Davis, transferred to Lahore.

Asst. Surgn. Hardial Singh, doing genl. duty at Mayo
Hosp. Lahore, to Ferozepore Civil Hosp., which he joined on
30th June, relieving Asst. Surgn. Thakur Das, Rai Bahadur.

On return from furlough, 3rd class Hosp. Asst. Ibrahim
resumed charge of Dhepal Canal Disp., Ferozepur Dist.,
on 18th May, relieving 3rd class Hosp. Asst. Mehta Hakim
Singh. Furlough granted to Hosp. Asst. Ibrahim was extend-
ed by two days.

On being relieved of charge of Dhepal Canal Disp., Feroze-
pore Dist., 3rd class Hosp. Asst. Mehta Hakim Singh was
granted priv. leave for 2 months and 8 days from 18th May.

On return from leave, 3rd class Hosp. Asst. Haribagwan
Das reported himself to Civil Surgn., Gujraon, for genl. duty
on 1st July.

Second class Hosp. Asst. Davi Ditta, 2nd S.W.
Railway, Montgomery, to Gurga Disp., Montgomery Dist.,
which he joined on 24th June, relieving 3rd class Hosp. Asst.
Rudha Khan.

Third class Hosp. Asst. Rudha Khan, from Gurga Disp.,
Montgomery Dist., to N.-W. Railway, Montgomery, which he
joined on 25th June.

Third class Hosp. Asst. Khuda Baksh, doing genl. duty at
Amritsar, to Upper Sutlej Canal Division, Lahore Dist., which
he joined on 18th March, relieving 1st class Hosp. Asst.
Abdulla Khan, retired.

Third class Hosp. Asst. Isa Charn, doing genl. duty at
Gujranwala, to Lyallpur-Wazirabad Railway Works, which
he joined on 28th June.

On return from leave 3rd class Hosp. Asst. Mul Singh re-
ported himself to Civil Surgn., Rawalpindi, on 28th June
for genl. duty.

On return from leave, 3rd class Hosp. Asst. Belf Ram re-
ported himself to Civil Surgn., Umballa, for genl. duty, on
6th June.

First class Hosp. Asst. Amir Shah, doing genl. duty at Mayo
Hosp., Lahore, to Kasur Disp., Lahore Dist., which he joined
on 6th June, relieving Asst. Surgn. Ralia Singh.

Asst. Surgn. Ralia Singh, from Kasur Disp., Lahore Dist.,
to the N.-W. Railway Hosp. at Lala Musa, which he joined
on 13th June, relieving Asst. Surgn. Bure Khan.

MADRAS GOVERNMENT.

Surgn.-Maj. T. H. Pope, furlough for one year and three
months, from or after 20th July.

Asst. Surgn. J. W. Pritchard, for six months from the
16th April on (*m.c.*)

BOMBAY GOVERNMENT.

The following transfers are sanctioned :—

Asst. Surgns. F. S. M. D.—Alexander Hepburn MacGrigor,
3rd class from Mily. Dept. to Civil Dept. temp., and attached
to St. George's Hosp. Bombay, from 2nd July *vice* Asst. Surgn.
3rd class Francis Hubert Dean Netscher, granted leave.

Hosp. Asst. Rajana Lookaji, 1st class, from Malegaon Disp.,
temp. up to 8th June, returned to Civil Hosp., Thapa, from
10th June.

Hosp. Asst. Samaldas Nauji, 3rd class, from Gogha Disp.,
temp. up to 4th June, to genl. duty, Ahmedabad, from 10th
June.

Hosp. Asst. Maneklal Manonias, 3rd class, from Viramgam
Disp., temp. up to 16th June, to genl. duty, Ahmedabad,
from 28th June.

Hosp. Asst. Chhaganlal Atmaram, 3rd class, from Mandal
Disp., temp. up to 11th June, to genl. duty, Kaira, from 16th
June.

Hosp. Asst. Atmaram Bapuji, 3rd class, from Civil Hosp.
Dhulia, up to 1st July, to genl. duty, Dhulia, from 1st July.

Hosp. Asst., 1st class, Shaik Usif, from Mirajgaon Disp.,
temp. up to 4th June to genl. duty, Ahmednagar, from
8th June.

Hosp. Asst. 3rd class, Baborbhai Chhatralal, Jalalpur
Disp., Kathiawar up to 14th June to genl. duty, Rajkot, from
15th June.

Hosp. Asst. Daji Dhoneo Joshi, 1st class, from Thana
Civil Hosp., temp. up to 10th June to genl. duty, Thana,
from 10th June.

Hosp. Asst. Daji Dhoneo Joshi, 1st class from Thana,
genl. duty, up to the 16th June to Deccan Convict Gang,
temp., from 21st June, *vice* 2nd class Hosp. Asst. Krishnaji
Luxmon, granted leave.

Hosp. Asst. Ganesh Ramchandrar, 3rd class from Civil Hosp.
Satara, up to 15th June, to Mharvad Disp., from 21st June,
vice 1st class Hosp. Asst. Wasudev Balkrishna, transferred.

Hosp. Asst. Wasudev Balkrishna, 1st class from Mharvad
Disp., up to 21st June, to Niphad Disp., (New) from 1st
July.

Hosp. Asst. Motiram Durgaram, 3rd class, from genl. duty,
Ahmedabad up to 15th June, to genl. duty, Kaira, from 2nd
June.

Hosp. Asst. Rajaram Shivram, 3rd class, from Civil Hosp.,
Sholapur, up to 8th June, to genl. duty, Sholapur, from 8th
June.

Hosp. Asst. Joseph Samuel, 1st class, from Parumal Khubchand Dispy., Sehvan, up to 31st May, to Larkhana Dispy., from 1st June.

Hosp. Asst. Partabrai Topandas, 2nd class, from genl. duty Hyderabad, up to 26th May, to Parumal Khubchand Dispy., Sehvan, from 31st May as a tempy. measure.

Hosp. Asst. Metharam Hariasing, 3rd class, from Dist. Prison, Shikarpur, up to 26th May, to Kotri-Bohri Ry., Hyderabad Dist., from 31st May.

Hosp. Asst. Khushaldas Khemchand, 3rd class, from Kotri-Bohri Ry., Hyderabad Dist., up to 31st May, to Parumal Khubchand Sehvan Dispy., from 4th June.

Hosp. Asst. Partabrai Topandas, 3rd class, from Parumal Khubchand Dispy., Sehvan, up to 4th June, to genl. duty, Hyderabad, from 6th June.

The undermentioned are allowed leave :—

Asst. Surgn. Francis Hubert Dean Netscher, St. George's Hosp., Bombay, priv. leave for ninety days from 2nd July.

Second class Hosp. Asst. Krishnaji Luxmon, Deccan Convict Gang, priv. leave for three months from 21st June.

Third class Hosp. Asst. Shridhar Venkatish, Westropp Hosp., Savantvadi, priv. leave for three months from 3rd July.

Third class Hosp. Asst. Bawamiya Mahometmiya, genl. duty, priv. leave for fifty days from 1st July.

Third class Hosp. Asst. Ranchodlal Mancharam, genl. duty, priv. leave for two months from 30th June.

The undermentioned 3rd grade Hosp. Asst. to be 2nd grade Hosp. Assts.—Niragoo Dhurmalingam, from 27th July.

The undermentioned is admitted into service as 3rd class Hosp. Asst. from 17th June, and placed on genl. duty, Allahabad. He will bear genl. number marked against his name :—Motiram Durgaram.

Second Class Hosp. Asst. Anaji Pandurang, (returned from leave), received charge of Mirajgaon Dispy., on 4th June.

Second class Hosp. Asst. Popatlal Lalubhai (returned from leave), received charge of Gogha, Dispy., from 4th June.

First class Hosp. Asst. Hari Krishna Nayaker (returned from leave), received charge of Virangam Dispy., from 16th June.

Third class Hosp. Asst. Hargovind Dhaneshwar, (returned from leave), received charge of Jetalpur Dispy., from 14th June.

Second class Hosp. Asst. Bankay Bohari (returned from leave), received charge of Mandal Dispy., from 11th June.

Second class Hosp. Asst. Govind Tautia, (returned from leave), received charge of his duties at Civil Hosp., Sholapur, from 8th June.

Third class Hosp. Asst. Yeshwant Shridhar Shidhaye (returned from leave), received charge of his duties at Civil Hosp., Dhulia, from 1st July.

Surgn.—Capt. T. E. Dyson, M.B., C.M., and Surgn.—Maj. K. S. Nariman respectively delivered over and received charge of office of Deputy Sanitary Commr., Gujarat Registration Dist., on 11th July.

CENTRAL PROVINCES GOVERNMENT.

Chief Commr. is pleased to appoint Surgn. Lt.-Col. H. K. McKay, Civil Surgn., Jubbulpore Central Jail, in addition to his own duties, during the absence on priv. leave of Mr. E. W. Payne or until further orders.

Surgn. Lt.-Col. H. K. McKay, Civil Surgn., Jubbulpore, is apptd. to charge of Reformatory School, Jubbulpore, in addition to his own duties during absence on priv. leave of Mr. E. W. Payne.

The Chief Commr. is pleased to appoint Major L. S. Peyton, 14th Bengal Lancers, to be a Magistrate of 3rd class and to declare that the powers herein conferred shall be exercised by him as Off. Cantonment Magistrate within the limits of Jubbulpore Cantonment, during absence on priv. leave of Mr. E. W. Payne, or until further orders.

Asst. Surgn. Mrigendraji Mitter, attached to Main Dispy., Kanam, is apptd. to office as Civil Surgn., Hoshangabad, during absence on priv. leave of Surgn.-Maj. C. Henderson.

The Chief Commr. is pleased to appoint Asst. Surgn. Mrigendraji Mitter, Offg. Civil Surgn. of Hoshangabad, to executive and med. charge of Hoshangabad Jail.

Surg.-Maj. C. Henderson, Civil Surgn., Hoshangabad, availed himself, on 19th ultimo, of the priv. leave granted him.

Surg. Maj. C. Henderson made over executive charge of Hoshangabad Jail to Mr. R. H. Ryves, I.C.S., Asst. Commr., on 19th idem.

Asst. Surgn. Mrigendraji Mitter, Offg. Civil Surgn., assumed charge of his duties at Hoshangabad on assumption of 20th ultimo.

Asst. Surgn. Mrigendraji Mitter, Offg. Civil Surgn., assumed executive and med. charge of Hoshangabad Jail from Mr. R. H. Ryves, I.C.S., Asst. Commr., on 21st ultimo.

Asst. Surgn. Lakshmi Narayan Chaudhari and Mr. T. W. Quinn respectively made over and assumed charge of office of Civil Surgn., Damoh, on 28th idem.

Mr. T. W. Quinn, Offg. Civil Surgn., Damoh, assumed executive and medical charge of Damoh Jail, from Asst. Surgn. Lakshmi Narayan Chaudhari, on afternoon of 28th ultimo.

On being relieved by Civil Hosp. Asst. Chakrabarti, on return from priv. leave, 2nd class Civil Hosp. Asst. Prakash Singh, tempy. attached to Police Hosp., Sambalpur, is directed to do duty under Civil Surgn., Sambalpur, until further orders.

Second class Civil Hosp. Asst. Ganesh Parbhad, doing duty under Civil Surgn., Sambalpur, is posted to Main Dispy., Sambalpur.

RUHMA GOVERNMENT.

Third grade Hosp. Asst. Maung Po Mya relinquished charge of his duties at Police Hosp. Monywa, Lower Chindwin Dist., on 8th May and resumed charge of Police Hosp., Monywa, Lower Chindwin Dist., on 27th May.

Second grade Milly. Hosp. Asst. A. Govindasawmy Pillay made over, and 2nd grade Milly. Hosp. Asst. L. David assumed charge of Shore Dispy., Mandalay, on 21st June.

Third grade Hosp. Asst. Kolas Chander Palit relinquished med. charge of Kungtung Road Survey Party 5th 7th June, and assumed med. charge of Kengkan-Kungtung Telegraph Party on 8th June.

Third grade Hosp. Asst. Hazari Shariat relinquished charge of Outpost Hosp., Shweilan, Ruby Mines Dist., on 11th June.

Third grade Hosp. Asst. Sunder Singh, on availing himself of priv. leave for one month, relinquished charge of Outpost Hosp., Mongon, Ruby Mines Dist., on 11th June.

Third grade Hosp. Asst. M. Parumal Pillay relinquished charge of Outpost Hosp. Mobnyin, Katha Dist., on 20th May, and assumed charge of Outpost Hosp., Pinlebu, Katha Dist., on 12th June.

Third grade Hosp. Asst. Provoker Panigrahi relinquished charge of Outpost Hosp., Pinlebu, Katha Dist., on 12th June and assumed charge of Police Hosp., Katha, on 22nd June.

Third grade Hosp. Asst. Syal Abdul Gunny, on availing himself of leave on (m. c.) for one month, relinquished charge of genl. Hosp., Mandalay, on 24th June.

Third grade Hosp. Asst. Amrita Lal Gaba relinquished charge of genl. Hosp. Rangoon, on 29th June, and assumed charge of Contagious Diseases Hosp., Rangoon, on same date.

Third grade Hosp. Asst. Shaik Kader Bax relinquished med. charge of Contagious Diseases Hosp., Rangoon, on 29th June, and assumed charge of Jail Hosp., Rangoon, on the same date.

Third grade Hosp. Asst. Pydiath Appa, on transfer to Kyaukse, relinquished charge of Jail Hosp., Rangoon, on forenoon of 1st July.

Third grade Hosp. Asst. Shaik Abdul Majid assumed charge tempy. of Police Hosp., Monywa, Lower Chindwin Dist., on 11th June, and relinquished charge on 14th June.

Third grade Hosp. Asst. Wazir Singh relinquished med. charge of his duties with the Police Party of Maignyo, Ruby Mines Dist., on 27th Dec. 1894, and assumed charge of Outpost Hosp. Maignyo, Ruby Mines Dist., on the same date.

Third grade Hosp. Asst. Wazir Singh relinquished charge of Outpost Hosp. Maignyo, Ruby Mines Dist., on 1st June and assumed charge of Civil Hosp. Kindat, Upper Chindwin Dist., on 20th June.

ASSAM GOVERNMENT.

Sick leave for four months is granted to 3rd grade Hosp. Asst. Himala Charan Ghosal, in med. charge of Sherchip outpost in North Lushai Hills Dist., from 17th April.

Third grade Hosp. Asst. Muhammad Salim, a Superny, in North Lushai Hills Dist., is apptd. to med. charge of Sherchip outpost in that dist., from 17th April, during the absence on sick leave of 3rd grade Hosp. Asst. Himala Charan Ghosal.

Priv. leave of absence for three months granted to 3rd grade Hosp. Asst. Ahsab Ali, in med. charge of Telahi Dispy. in Nowgong Dist., from 20th June.

Third grade Hosp. Asst. Sayyad Abdul Jalil, a superny, in the Nowgong Dist., is apptd. to med. charge of Telahi Dispy. in that dist. from 20th June, during absence on priv. leave of 3rd grade Hosp. Asst. Ahsab Ali.

ORIGINAL ARTICLES.

QUININE IN CHOLERA.

By SURGEON-CAPTAIN PATRICK HENRI M.D.,

F.R.S.E., F.R.C.S.E., D.P.H. (Cantab.)

Lecturer on Pathology and Clinical Medicine, His Highness the Nizam's Medical School, Hyderabad.

A RECENT issue of the *Indian Medical Record* alludes to a statement by an American writer to the effect that the use of quinine in the treatment of cholera should reduce the mortality by 6 per cent. Whilst I am an ardent advocate for the use of quinine, both prophylactically and therapeutically in cholera, and have used it for four years in this way, I doubt whether we can ever approach such a low mortality by the use of quinine, except at towards the end of epidemics. I believe I was the first to show that the use of quinine in cholera is a perfectly rational line of treatment, and although my reasons for so employing it may not be accepted, the results obtained indicate that it is at least deserving of further trial.

We have recently passed through a terribly severe, though localised, epidemic of cholera, from the commencement to the end of which quinine formed the fundamental agent used in the treatment. It was administered in every possible way that could ensure a certain quantity getting into the system within a limited time. We gave it as a rectal injection (in the same way we use it in amœbic dysentery), by the mouth, and hypodermically. The particulars of the way of employing the drug are given in a paper that will be published shortly. The statistical results are not so encouraging as the writer quoted would lead us to believe they should be, but as more than half (55 per cent.) of the cases were only brought under treatment during the stage of collapse, it is scarcely fair to judge of this particular group of cases recorded in that epidemic. Of the 88 treated during the first stage with quinine, 58 recovered or about 67 per cent; but of the 103 cases treated in the collapse stage, only 50 recovered, or about 48.5 per cent. Prophylactically we have given quinine for the last four years also, and although we cannot adduce large figures to show its effects in this direction, yet *pro tanto* they are satisfactory, for in no instance did cholera occur in persons who at the time of attack were taking large doses of quinine. In the early epidemics of cholera during my incumbency as Health Officer of the Cluddergaunt Municipality (1887-1890) we lost several members of our sanitary staff yearly from cholera—almost always men who were engaged in carrying out the treatment of pauper patients, or in fumigating or disinfecting houses, or in destroying the defects, or were in other ways brought into close relation with the infected. In one epidemic we lost 7 out of 51 sanitary peons, and 6 out of 74 sweepers from cholera. Since then we have only lost four men, and we attribute the difference to the use of quinine by many of those employed. The theory upon which we use it is, that in cholera there is a hæmatozoon in which sporulation is continuous, and not intermittent, as is the case with the *plasmodium malarie* of ague. It is now well

known that in ague, once sporulation has begun, quinine has no effect on the process, but if it be given a few hours before sporulation commences, it checks the process;—hence the frequency with which we see a 30-grain dose of quinine check an ague, when given four hours or so before the regular attack, although it may have been given regularly in divided doses for several days previously without any effect. I also believe, although the evidence to that effect is not quite complete, that it is during sporulation the poison which causes ague is manufactured, this poison producing a profound effect on the sympathetic system, besides disturbing the thermotoxic mechanism. If we can prevent sporulation, we check any further creation of the specific ague-producing virus. I believe that similar principles should guide us in our treatment of cholera, although in it sporulation has already occurred and continues until we intervene to prevent it with the appropriate remedy. This being so, there is already a quantity of the virus in the system. Having effected the cessation of sporulation, our every effort should be to endeavour to effect the elimination of the toxins which have such a paralyzing effect on the vital functions. It is very probable that Sir GEORGE JOHNSON was not remote from the truth when he stated that the alimentary tract was one of the outlets for the poison. In the stage of collapse the system cannot tolerate any further loss of liquid with advantage, and as absorption is for the time being paralysed, there being an exosmosis instead of an osmosis, we should endeavour to replenish the blood by a saline fluid (such as SCHMIDT'S) in some way.

There are two chief means of effecting this: through the peritoneal cavity, as originally suggested by Sir B. W. RICHARDSON, or through the veins. My experience of the former is nil, but I have done 15 transfusions, and I consider that in the treatment of cholera in the stage of collapse, the continued use of quinine, and the introduction of saline fluids into the circulation is capable of effecting a great reduction of the mortality. I see no reason why the soluble form of quinine should not be introduced at the same time, as we introduce the saline fluids in imitation of the treatment followed by MARCHIAFAVA, BIGGAMI, and others in the treatment of the pernicious malarial, or summer-autumn fever of Italy.

A TYPICAL EPIDEMIC OF CHOLERA.

By D. MORISON, M.D., C.M.

Rajshaye.

ABOUT the middle of October, an annual *mela* is held in the district of Rajshaye, at a place called "Ketre," 12 miles distant from Rampore Bauleah. Every year as the *mela* ends cholera breaks out either in the *mela* itself, or along the course taken by the pilgrims on their way to their homes. Some years so-called sporadic cases occur within the municipality of Rampore Bauleah; at other times it assumes the form of an epidemic. I have observed these visitations for many years, and in every epidemic found good reason for believing that the water-supply at the river ghats, or in the numerous tanks, was contaminated by cholera defects. This year having traced one of these

miniature epidemics, which occurred shortly after the main, to its source. I thought it might be of interest, and worthy of record as a typical epidemic of cholera.

On the 25th October last a man came to the Mission Dispensary for cholera medicine for two patients who were ill in a village called Bindatampore, about three miles from my dispensary. He stated that four persons had already died, and that two others were ill; but that the first case—a woman who had been to *Ketre mela*—had recovered. I did not find it possible to visit the village till some days after, but meantime ordered them to close the well in the court-yard of the house where the first cholera case occurred. I had learned from the messenger that the woman who had been to *Ketre mela* defecated near the well from which the family and others obtained their drinking water. The order to close the well was not complied with, until some more fresh cases occurred, after which the well was abandoned. After a few days I visited the village, got as many of the people together as I could, and asked them particularly regarding the water-supply of each house in which a case of cholera happened. I found that every house, without exception in which cholera had appeared, took their drinking water from the well in the court-yard of house number No. 1. I also examined the place on the verandah, where case No. 1 slept, and the place where she latterly defecated. It was exactly 7 feet 6 inches from the well. The well itself is what is called a *kutcha* well. It is lined with burnt clay rings to keep it from falling in: its diameter is 22 inches, and the surface of the well-water was 2 feet 6 inches from the ground level. During the illness of the first case, the unseasonable heavy rains which fell towards the end of October, occurred. Thus, the conditions for the actual contamination of the well-water with cholera dejecta could scarcely be more favorable, unless they were dropped into the well. The results of the epidemic—12 cases and 10 deaths—prove, I think, that infection of the well-water must have taken place, either through soakage and filtering down of the surface water containing the virus, during and after the heavy rain; or possibly by the woman herself, in the act of drawing water from the well, with her hands (the left hand is invariably brought into actual contact with the faeces in the process of ablution after defecation), conveying the virus to the rope or vessel with which the water is lifted.

The following table shows the results of the epidemic in the village:—

| | | | |
|----------------|-------------|-----------------|--------------------|
| House No. 1 .. | 1st case .. | A woman | aged 55 recovered. |
| | 2nd .. | A man | " 40 died. |
| | 3rd .. | A woman | " 35 " |
| | 4th .. | A man | " 25 " |
| House No. 2 .. | 5th .. | A woman | " 35 " |
| | 6th .. | A woman | " 30 " |
| House No. 3 .. | 7th .. | A woman | " 40 " |
| House No. 4 .. | 8th .. | A boy | " 15 " |
| House No. 5 .. | 9th .. | A woman | " 35 " |
| House No. 6 .. | 10th .. | A child, female | " 3 " |
| House No. 7 .. | 11th .. | A woman | " 60 " |
| House No. 8 .. | 12th .. | A man | " 30 " recovered. |

These were all the cases that occurred during the epidemic in the village, and all these households took their drinking water-supply from the well in the court-yard of house No. 1. There was one house, much nearer the infected house than some of the houses attacked, in which no case of cholera occurred; but the man himself gave the explanation, by informing me that he had a well of his

own, and did not deign to go to the well of house No. 1 for water. Thus he had at least one source of water free from the illness of the first case.

There are some points of great interest and importance connected with this epidemic to which I wish to draw attention: (1) facts like these, and they are common in Bengal every year, should make one hesitate to state publicly, as Dr. Duka did at the 8th International Congress of Hygiene and Demography, that "attacks of cholera occur in numerous villages at a distance, which do not use (contaminated) river water at all. How did these wells and separate and independent sources of water-supply get their *comma bacilli*?"

The answer is given by the facts connected with the origin and spread of this epidemic; and I believe a similar answer could be given in every such supposed sporadic case if we could only trace as easily, the different ways by which the virus or bacillus is conveyed to the alimentary canal.

Another illustration of the same point was afforded a fortnight later by a case of cholera which happened in a village named Bhirmeriang, one mile-and-a-half north-west of Bindatampore. It looked uncommonly like genuine "sporadic cholera," for I could trace no direct connection between the villages during or after the first epidemic. The infection could not be carried by the wind, as the prevailing wind was north-west. I enquired where the boy had been before he took ill, and learned that on the 14th November he had accompanied his uncle on a cart to Rampore Bauleah, five miles distant, where cholera cases were occurring almost daily. He remained there that night, took food and returned on the following day, 15th November, on the evening of which day he was seized with cholera, but eventually recovered. Then his grandfather, two brothers and a little girl took ill and died, four deaths in all, confined to one house. Another case was said to have occurred in the next house, but the woman recovered. Outside of these two houses no cases of cholera occurred in the village. The epidemic ceased entirely. I again made minute enquiries a week or ten days after, but no other person outside these two families took cholera. All the other villagers were independent of that house; each house had its own well, and hence the epidemic was limited to those who came into direct contact with the boy who brought the disease to the village. A little careful enquiry was sufficient to elicit information that entirely dispelled the "sporadic theory."

(2) DR. DUKA further says: "And when the disease attributable to the presence of these micro-organisms in well-water ceases, what becomes of the enormous crop of these microbes, or why does the bacillus so suddenly lose its pathogenic properties to become innocuous?" It is a question that naturally occurs to any one who has given attention to the disease. We have long been familiar with the undoubted fact that in all great epidemics of cholera there is a brief period—very brief in most epidemics—during which the virus has not seemingly attained its maximum virulence. A second period, longer in duration, of intense virulence, and a third period at the close, when it is on the wane and about to become mild or even innocuous. The epidemic before us illustrates these periods.

the first reserved, the last, however, recovered, the last man attacked is a young man, but all the others died. The same is not verifiable in the second epidemic at Bhirmerdeng. The first recovered, so did the last, all the others attacked died. Although we may not be in a position to give a complete answer to this question, or be able to explain the process by which the comma bacilli lose their pathogenic properties, yet the fact itself may be placed beyond doubt and become available for practical purposes. That the virus of cholera does lose its pathogenic properties or become inert in water after a time, has long been known; and the fact is once more emphasised in this epidemic—for the villagers began again to use the same well-water 14 days after the last case occurred, but no recurrence of cholera took place. KOCH^o whose investigations supply us with the most reliable information regarding the life history of the comma bacilli, informs us (1) that the period of activity and growth of this micro-organism, in suitable media, is brief but extraordinarily rapid up to a certain point, then they begin to decline, and their growth is arrested, but after two or three days they shrivel up and die, or become a prey to other bacteria present in the media; (2) that in the tank-water at Calcutta, where the soiled linen of cholera patients had been washed, the bacilli at the height of the epidemic "were so abundant that their number could not have depended on the dejections and washing water† from the cholera linen thrown at one time or another into the tank. Some growth must have taken place;" ‡ that the comma bacilli, although anaerobic, maintaining vitality without air or oxygen, yet require air or oxygen for their activity and growth.

If, now, we compare these characteristics of the comma bacilli with the behaviour of the infective material of cholera, we are at once struck with the correspondence between the alleged cause and the result as observed in epidemics and individual cases of cholera. Let me repeat them briefly: (1) the comma bacilli develop with extraordinary rapidity in suitable media, and subside in two or three days; so do the symptoms produced by the virus of cholera; (2) the bacilli die or become inert in water after three or four days, so does the virus of cholera; (3) the infective material of cholera, when it finds its way into well-water, must remain on or near the surface, as only the surface water can be lifted for drinking or culinary purposes. This also accords with what we know of the comma bacilli; they come to the surface to obtain from the air oxygen necessary for their growth and development. That the bacilli after becoming inert should again become virulent on passing through the alimentary canal of the human subject is to be expected from what we know of other infecting material. Thus the virus of rabies, the virulence of which has been diminished by passing through from monkey to monkey, may again be made intensely virulent by passing it through from rabbit to rabbit or guinea-pig to guinea-pig.

I do not say that these facts answer the question how the virus of cholera becomes inert; but I do say that

indications are not wanting in these investigations that the present trend of scientific research is in the right direction.

It will readily occur to one familiar with the above facts that the cause of an epidemic of cholera tracked as a sheet of water contracted into a superficial area, of less than four square feet (that being the area of the surface of the well), presented a unique opportunity for finding the microbes outside the human body, completing the missing link and thus proving beyond doubt that the comma bacilli are the cause of cholera. This occurred to me at once, and I further thought that, if it could be contracted into a surface of 22 square inches, why not still further contract it to less than half a square inch? This I attempted to do by taking a clean glass-stoppered bottle, full of the surface water of the infected well, during the height of the epidemic, and letting it stand for 24 hours or longer to allow the microbes time to come to the surface in contact with the air. The glass-stopper was removed, a glass cap admitting air freely, but excluding dust, was fitted on and the bottle set aside for examination. I had now, I thought, cholera microbes concentrated in a layer of water less than half a square inch, and ready at will to be put on the slide, or cover glass of the microscope for examination. I examined one drop after another without definite result, and concluded to abandon the search, as handling the water was not without risk to myself and others at that time.

The contents of the bottle were thrown away. Again I relented and sent for other two bottles of the water; but the epidemic had subsided, and it was doubtful whether the microbes could be there at all. I examined carefully and at last was rewarded by the sight of a field of microbes answering, I thought, in every respect to the comma bacilli described and delineated by KOCH.

I am, however, so convinced that the field was genuine that I shall not abandon the search, but apply the method adopted to the first suitable contaminated well I can obtain. The method is simple, and I think, efficient for those who, like myself, may have neither time, talent nor apparatus for conducting investigations with pure cultures of the comma bacilli.

The impression left on my mind by this miniature epidemic of cholera at Bindarainpore is not that it has taught us anything which we did not know before, but that it reiterates and emphasises the outstanding facts already known to us, viz. (1) that cholera does not arise *de novo*; (2) that it is due to an infecting material contained in the cholera dejecta, (I believe the comma bacilli) which can be conveyed to the alimentary canal by drinking water or other moist media; (3) that the virus loses its pathogenic properties after a time in well-water; (4) that its virulence is intensified by passing through the human subject; (5) that those who come most into contact with infected water suffer most, i.e., the women in the Indian villages. Since the above was written, I found that cholera was prevalent in two other villages. I investigated these epidemics to see if they would bear out the conclusions at which I had arrived. The following facts were elicited: (6) that looking to atmospheric conditions, rainfall and subsoil water, conditions which may and do modify epidemics—for the cause of cholera—is only diverting us from the true cause of cholera, which will invariably be

^o Dr. Robert Koch's Contribution to Cholera, Berlin, July 1904.

† The people of Bengal always wash their clothes in the tank, or if by a stream, it is done in the same way as in Europe is done, the water of which is thrown away.

found to be connected with infected ingesta in some liquid or moist form.

Additional facts regarding Epidemics of Cholera at the villages of Koola Tickor and Goshaitpore.

I. The first case of cholera which appeared at Koola Tickor was a woman who took ill on the 19th October 1894. The soiled clothes of this case were washed in the village tank in which all the villagers wash their clothes and bathe. This tank also supplies the village with drinking water. The tank is about 50 yards square and lies north and south, thus:—N. E. the north end being nearest the village. The clothes soiled with cholera dejecta were washed at the north-west corner of the tank, and all the 28 cases of cholera which occurred in the village up to the 15th December 1894 bathed at and obtained their drinking water from that corner of the tank. Those who bathed and used the water at the north-east corner of the tank were free from cholera. The epidemic went on continuously for seven weeks. On the 15th December I visited the village and found the epidemic as severe as it had been at any time during the previous seven weeks, and it gave no indications of abating, six persons being ill on that date. I was informed that at the end of the first fortnight there were indications that the epidemic was abating, but immediately afterwards it began again as severe as before. I explained to the assembled villagers the sources and media of contagion, and urged them either to abandon the tank altogether for a time, or to boil all the water taken from the tank before using it.

There were 28 cases of cholera up to the 15th December, and after that date up to the present time, no new case had occurred. They rigidly adhered to the instructions given, and the result was as stated. The epidemic which had gone on for seven weeks ceased entirely. The 28 cases consisted of 13 women, 10 children under 6 years of age, 3 children over 6 and under 12 years and 2 men. It may be asked why in this epidemic did the virus continue so persistent, since it was proved that the virus in the well-water epidemic at Bindarampore became inert in the course of 14 days of its own accord? The answer is given by the ascertained fact that the soiled clothes from each cholera patient were washed in the tank, and thus as the first infection disappeared, it was replaced by a new infection of the tank-water through the soiled clothes from fresh cholera cases.

II. While this epidemic was at its height, a man and two children fled from Koola Tickor on the morning of the 1st December to Goshaitpore, a village one mile distant where cholera had not yet appeared. At noon of the same day one of those children, a boy 8 years of age, was seized with cholera. He remained that day and all night in a house, 10 yards distant from the village tank. On the following morning the villagers sent them back to Koola Tickor, but not before they had contaminated or infected the village tank. In 9 days there were 10 deaths in this small village. I visited the village on the 10th December, and told them not to use the infected tank water, unless previously boiled, and endeavoured to explain to them the sources and media of contagion. They abandoned the tank and the epidemic ceased, no new cases having occurred after that date. In this village also the heaviest mortality fell on the women. There were 10 deaths, consisting of 7 women, 2 children and 1 man.

MALARIAL FEVERS AND CARBOLIC ACID TREATMENT.

By Asst. Surgeon, C. A. NARAYANA, L.M.S.

Kadur Medical Union, Chikmagalur.

Seeing that no cases of malarial fever, specially those accompanied with typhoid symptoms, treated by carbolic acid have been reported in your journal, I take the opportunity of bringing to the notice of the profession a series of cases that were so treated by me successfully in my private and hospital practice.

First case.—A Eurasian lad, *et.* nine years. The parents of the little patient having tried various patent remedies for six days without any good result, I was sent for.

Examination.—The skin was quite hot with a temperature of 104° F. The patient was in a delirious state, not having slept for two nights, and had a dry typhoid tongue, with puffiness and tenderness over the abdomen. The bowels were loose, moving about four to six times during the 24 hours, but were not quite characteristic of typhoid motions.

Treatment.—The usual antipyrine treatment, with cold baths, was tried for two days, without progressing at all, and the temperature not reducing, the symptoms became alarming and made the parents and the medical attendant anxious. I put the patient on the following mixture:—

| | | | |
|---|---------------------|-----|--------|
| R | Carbolic Acid, pur. | ... | ℥xxxvi |
| | Spt. Chloroform | ... | ℥ii |
| | Tr. Cardamom. Co. | ... | ℥iii |
| | Syrup of Roses | ... | ℥ii |
| | Aquam Camphor ad. | ... | ℥xii |

Sig.—Half an ounce every second hour with an equal quantity of cold water.

Five doses of the above mixture were taken from 8 A. M. to 8 P. M.

Result.—The patient, after five doses, perspired freely. He had two hours' sleep in the afternoon—the temperature went down to 100° for the first time. Tympanitis and the number of motions decreased, and he had a good night's rest. The mixture was now stopped, thinking that the temperature would not go up, but the next day towards morning, the patient began to develop the old symptoms, and the temperature mounted up to 103°. The patient was put back on the carbolic mixture, whereupon the symptoms at once decreased, and the temperature went down to 100°. From this time the carbolic acid mixture was kept up three times a day, steadily, with the result that the temperature never went up above 101° F. The fever subsided on the 25th day without any alarming symptoms throughout. The patient progressing, was put on quinine and arsenic as a tonic twice a day after food.

CASE II. A Mahomedan lad, *et.* 8 years had the same symptoms as the case above cited, but of a less serious type. The carbolic treatment proved successful, the antipyretic one failing.

CASES III-IV. were a Eurasian and Mahomedan lady respectively, who both suffered from remittent fever for 14 days. The same treatment was successfully adopted in both the cases.

CASE V.—A Mahomedan boy of 12 years was brought in from a village about 2½ miles away, having suffered

from food and exposure of bowels for over 15 days. After trying all the alkaline drugs the case was sent to me for treatment.

Examination: At first the patient presented signs of typhoid fever, but on closer observation I diagnosed it as a case of typho-malarial fever; as usual the antipyretic treatment failed to improve the graver symptoms and the ignorant parents began to grow tired of the carbolic treatment after a couple of days only.

On the 18th day, I put the boy on the carbolic mixture giving only four doses within 12 hours. To my surprise and to the joy of the parents, the boy improved steadily.

Diet.—In all the cases, the patients were given plenty of cold water to drink. Soda water was given freely and a strict milk diet with Mellin's food and essence of chicken.

Remarks.—No stimulants of any kind were found necessary. When the cases were put on the mixture the tongue cleared and lost its typhoid condition, the skin was cooler and moister and the patients never shewed any signs of weakness or prostration, which is generally the after-effect of continuous high fever; they were more cheerful than usual, and convalescence set in sooner in all the cases I observed. In a few other cases the usual long course of fever was to a greater extent checked.

The objects for quoting the above cases in your journal are:—

First.—Not having read in books or journals, of such cases being treated by purely carbolic acid, though it has been recommended by many physicians for typhoid fever.

Second.—The treatment has also acted well in cases of purely malarial fever (remittent fevers).

Third.—To request the members of the profession, who meet with such cases, especially those in malarial districts, to give the treatment a fair trial and to report successes in your valuable journal.

Fourth.—The success with which these cases have come out, where the ordinary routine antipyretic treatment would have failed and caused a deal of dissatisfaction and unpleasantness.

Fifth.—Large doses of carbolic acid being borne by the patients without any bad results.

Sixth.—I am inclined to think that large doses of carbolic acid prevent, in a way, the propagation of the malarial poison already in the system, thereby keeping down the fever and acting decidedly sooner and safer than quinine, which is advised to be given in the early stages to destroy the merozoites of LAVERAN.

ON SOME MODIFICATIONS IN THE USUAL METHOD OF EXTRACTING SENILE CATARACT.

By DR. B. H. NARAYATTY, L.M.S.

Teacher of Surgery and Midwifery, B. J. Medical School, Ahmedabad.

HAVING had many opportunities of performing the different operations for the removal of "senile cataract" I now beg to lay before the profession a few slight modifications in the usual method, which time and experience have suggested to me.

Without entering into the details of the different operations or the methods which surgeons from time to time have practised, it will be enough for me to mention that for a long time past it was the practice of ophthalmic surgeons—as indeed it was with me also—to remove the cataract by the "Modified Peripheral Linear Extraction" method (Graefe's operation), with the usual recognised stages of (1) external incision; (2) incision; (3) laceration of the capsule; (4) extraction of the lens; (5) cleaning the pupil of any cortical masses which may have been left behind, and the adaptation of the wound.

The incision in the eye was made just outside the micro-corneal junction, and it was rightly supposed that the peripheral position of the incision—lying as it did in the plane of the crystalline lens—enabled the cataract to be delivered without rotation on its axis. It was however, noticed that these little advantages, due to the position and form of the incision, were greatly counterbalanced by certain other disadvantages, as the escape of vitreous and the difficulty of preventing the iris from being entangled between the lips of the wound.

Owing to these facts, this operation, I believe, has now been practically abandoned by surgeons, who generally prefer to extract the cataract by the 3-millimetre flap operation first brought to the notice of the profession by DR. WEEKER.

It is, I believe, the usual practice with ophthalmic surgeons—and it is the one enjoined in most of the text-books—to freely dilate the pupil by atropine previous to the operation. For many years I invariably followed this rule, but have recently given it up in favor of eserine, and the results that I have thereby obtained have been so favorable, that I now generally prefer to contract the pupil (by eserine) in the following manner, as advocated by SWANZY and others:—

A short time previous to the operation a few drops of a 2 p.c. solution of sulphate of eserine (made with 1 in 5,000 of mercuric perchloride solution) are dropped into the eye, whereby the pupil is contracted to a pin's point. Of course the conjunctival sac and the face are well washed with boracic acid lotion or perchloride of mercury lotion (1 in 10,000) and the required instruments sterilised by being carefully boiled, whilst the eye is rendered anæsthetic by instillations of hydrochlorate of cocaine (4 p.c.). It is unnecessary for me to enter into a minute description of the 3-millimetre flap operation, which will be found in all the recent text-books on the subject. It will only be sufficient for me to point out the slight modification which I have adopted for some years past (having heard that some surgeons did the same by combining the 1st and the 3rd stages into one). It is usual with me now-a-days to lacerate the capsule with the point of the knife, at the same time that the external incision is being made in the cornea, whereby the necessity of introducing a cytotome at a subsequent period in the operation, is entirely done away with. The laceration of the capsule—at the same time that the external incision is being made—is done without any particular difficulty when the pupil is widely dilated by atropine, but it requires a steady hand and some experience to be able to do it successfully when the pupil has been contracted to a

pin's point. When the operation was performed, after previous dilatation of the pupil by atropine, I noticed that there always was a great tendency for the iris to prolapse between the margins of the wound, and that it required to be carefully replaced within, before accurate apposition of the wound could be secured. This difficulty is, however, seldom experienced when eserine is used instead of atropine, for seldom then does a portion of the iris prolapse into the wound, or if it does, it is easily replaced, without the likelihood of its prolapsing again. It is for these reasons that I now prefer to contract the pupil by eserine before operating. I may also add that the formation of a very neat artificial pupil is also rendered easier by this method. Such, at least, has been my experience in the cases that I have operated upon in this manner, and I take the liberty of mentioning these facts, not so much with the idea of advancing a new method, as of inviting the attention of surgeons to give it a trial, and to publish their experience on the subject.

The lens being extracted in the usual manner by means of gentle pressure by a hard, smooth rubber, spoon-curette being made from below upwards over the surface of the cornea. Our next care is to free the pupil of any cortical substance which might have been left behind, as well as to prevent any tag of the capsule or a portion of the iris from prolapsing between the margins of the wound. It is very essential to attend to these points carefully, as neglect of these precautions may lead, not only to the pupil being drawn up to one side, but to the serious danger of repeated attacks of iritis or irido-cyclitis, which may ultimately end in complete loss of vision.

Lastly, the effects of eserine are neutralized by putting into the eye a few drops of the solution of atropine (2 grs. 3i) and a double fold of lint dipped in boric lotion, with a pledget of absorbent cotton soaked in the same, is laid over the eye, which is then bandaged along with the other eye. As a part of after-treatment we are told that a strictly recumbent position should be enjoined for the first two or three days after the operation. No doubt a recumbent position is least likely to disturb the position of the parts within.

I may, however, state that I know of a number of cases where patients in absolute disregard of instructions, have either frequently sat up in bed a few hours after the operation and continued to do so, as often as they liked, or have even insisted upon being walked about in the room, without their eye or the vision being in any way damaged thereby.

A few words about cataract extraction without "iridectomy" will, perhaps, not be considered out of place here. Surgeons have often been known to point out with legitimate pride to the entire circular pupil left by them where no iridectomy has been performed and where the disfigurement or mutilation of the iris (as it is called) is done away with. I have practised this method of operation several times, and have perhaps, like others, been pleased to see a beautiful movable pupil without the gap so frequently noticed in it. I fear, however, that in spite of the pretty appearance of the pupil, this method cannot be recommended for general use, because of the well recognised danger of the prolapse of the iris, which in

spite of a strictly recumbent position has been known to take place even some days after the operation, upon the most trivial exciting cause. The iris thus hanging in the wound, the eye is exposed to the grave risk of "irido-cyclitis," which even follows months after the operation and causes total loss of vision.

The old operation of the "removal of the lens in its capsule," deserves, I think, to be more widely practised than it is at the present day. Iridectomy may perhaps with advantage be omitted in this method, for, when the lens is removed without opening its capsule, there is of course, no possibility of the formation of capsular cataract, or of the soft lenticular matter being left entangled in the iris and setting up violent inflammation in that structure—risks more or less present in the method practised by surgeons at the present day.

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IS MAN ADAPTED NATURALLY TO EAT VEGETABLES ALONE?

By P. V. JEHARATNAM PILLAI, C.M.S.

Myore Medical Department.

IN the August number of the *Indian Medical Record* for 1892, the above question is answered by a correspondent in the affirmative, on the sole hypothesis of the "Teeth."

If the structure of the teeth in man be the only criterion wherewith to decide that man is created to be a pure vegetarian, this vexatious question of "What should he eat?" would have ere long been settled and the nature of man would not have rebelled against this provision of Nature of "Vegetable food alone" for him any more than an infant could have an aversion for the mother's milk. For Nature, though a benevolent mother, can never suffer an iota of her laws to be violated, and any disobedience is invariably dealt with due punishment, as there is no forgiveness with her. On the contrary, she rewards obedience with enjoyment and pleasure. It will be seen therefore, that when man violates the natural law, (if there be any), of living upon "Vegetable alone" he would have naturally been punished for his disobedience. But experience has taught us that such is not the case. Hence man's food is not "Vegetable alone."

2. If man is intended by Nature to live upon "Vegetable alone" on the score of his teeth, their structure should be mainly characteristic of the herbivora, having more molars with broad rough surfaces resembling a mill stone, whereas the structure of human teeth is not so. Hence man's food is evidently not "vegetable alone" from a dental point of view.

3. Setting aside then the argument of the teeth which serve in cutting and grinding food, the enquirer should ascertain where the food thus cut and ground goes? As it goes to the intestinal canal, a judicial enquiry regarding the length and capacity of the digestive apparatus should occupy a most important place in the arena of argument; for it is there, in the intestinal canal that the assimilation of food and the nourishment of the animal commences. The carnivora have, obviously a short and simple, and the herbivora, a long and complex intestinal

*Being a reply to an Article which appeared under the same title in the *Indian Medical Record* for August, 1902.

canal. If man had been destined to be purely herbivorous, his mouth would have been provided with four stomachs and a long intestinal canal like most of the herbivorous animals. Again, however, is not the case with man, he is clearly not intended by Nature to live upon "vegetable alone."

4. The theory of a pure vegetable food for man is also impossible of universal application, from the geographical distribution of mankind over the world. Although a Scottish Highlander and a Negro Hottentot are men, yet both live lives as divergent as the North and South poles, just as the fauna and flora of one country differ from those of another.

Man depends for his supply of food on the production of the earth; and to raise which, he has to expend his muscular and nervous energy which also differ according to the demand for food and raiment. In tropical countries, where a high temperature diminishes the quantum of muscular energy, the fertility and productiveness of the soil are increased in like proportion, so that less labor suffices, as the demand for food and raiment is less there. On the other hand, in colder latitudes, where the earth is generally sterile, muscular energy is greatly increased in proportion to the higher demand for food and raiment. Further, the food afforded by the soil in each climate appears to be adapted to the maintenance of the bodily constitution of the people, and to the supply of the muscular energy necessary for the particular wants of the individuals. In the Arctic regions no farinaceous food-grains ripen nor can any vegetable grow owing to the inclemency of the weather. When tourists and navigators to these regions were asked how they, accustomed to the bread and vegetables of a temperate climate, were able to endure the pure animal diet which formed their only support in all their travels, their reasonable answer born of experience, was, "that the effect of extreme dry cold to which they were exposed constantly, was to produce a desire for the most stimulating food they could get; that bread in such a climate was not only not desired but was comparatively unimportant as an article of diet; that pure animal food—the fatter the better—was the only sustenance that maintained the tone of their corporeal system; but that when it was in abundance (the quantity required being much greater than in milder latitudes), a delightful vigour and buoyancy of mind and body were experienced, which rendered life more enjoyable."

In beautiful harmony with these needs of the human frame, these regions abound during summer in countless herds of deer, in rabbits, partridges and also in fish. The flesh of these, dried and stored up, constitutes delicious food in winter when the earth is wrapped in one mantle of snow. Among the Greenlanders and other Esquimaux tribes, nothing is so much relished as the fat of the whale or walrus, while a slice of bread is rejected with strong indications of disgust.

The hot plains of Hindustan are not so favorable for the extensive rearing of sheep, &c., as the cold mountainous regions of Britain, Germany, &c., but produce in prodigious abundance, farinaceous food-grains and vegetables on which thrives with less muscular energy, however, the vegetarian Hindu, to whom the very idea of

eating meat would be repulsive, while to the people of the colder countries of Europe, the diet is and ought to be, animal and farinaceous food, the former predominating; and on such a food accordingly, the European fares best with increased muscular and nervous energy. The inference is, therefore, that man is not naturally constituted to live upon "vegetable alone."

5. If man, on the other hand, is intended by Nature to live upon flesh alone, the formation of his teeth, the structure of his intestinal canal and form of appetite, all would strictly resemble those of the carnivora. As he differs from them more or less in these respects, he is not a purely carnivorous feeder.

6. To the question which would naturally rise out of the above considerations, "What shall be his diet then?" the most cogent answer appears to be that "Man is constituted to live upon a mixed diet," by which is meant a wholesome union of both animal and vegetable food. Man is the most highly organized being in the created world, of which he is the undisputed lord, so that he says with confidence,

"I am the monarch of all I survey,
My right there is none to dispute,
From the centre all round the sea,
I am the Lord of fowl and brute."

God has endowed him with superior sense to adapt himself, as best he can, to the influences of the external world. The three kingdoms of mineral, vegetable and animal over which extends his sway, contribute each their quota to his pleasure and are subservient to his enjoyments. They not only supply him with materials to build a habitation to live in, and manufacture raiment to wear over his hairless soft-skinned body, but also with food to eat.

He has a wide range of choice in the selection of his food, which must come from one or more of these kingdoms. Man uses only salt (sodium chloride) as it is offered to him by Nature, while the other mineral and inorganic matter of which the world is composed are adapted to nourish and support all kinds of vegetables, which supply animals in turn with nourishment; and their flesh again is for the use of others and amongst them, man himself.

7. Man is destined to live upon both animal and vegetable food for the reasons that he has a mixture of teeth, of both herbivorous and carnivorous animals and that his digestive apparatus is less complex than that of the herbivorous and more so than that of the carnivorous. It should also be understood that animal food is more like our flesh and blood than vegetable, and that they are easily digested and assimilated—the like attracts the like.

Animal food is far more preferable to vegetable, inasmuch as the former presents to man nourishment in a concentrated quantity, richer and more sustaining in quality than the latter, from which to derive the like benefits, a very large quantity is required. Is there any nation or sect on the earth, who are purely herbivorous? It has become impracticable even with the Brahmin, the standard specimen of human herbivora, if I am allowed the term, to dispense with milk and butter which, it is needless to say, are animal products, and without which, his food is never prepared and eaten.

* Vide George Combe's "The Constitution of Man," page 45.

8. Before they propose such theories as "pure Vegetable food" for man, its advocates should pause for a while and reflect why man, while it is possible with him to eat and digest *enteria veribus*, any cooked flesh, is unable to treat as, any article belonging to the vegetable world? For, it requires too many poisonous plants to be used with impunity; and these poisonous plants, the animals by reason of their instinct, and men at the cost of their life, therefore, carefully avoid.

9. Whence are these drugs and medicines which appear to be as many poisons to a man in sound health? Do they come mostly from the animal world or from the mineral and vegetable?

What are alcohol and opium—which are dreaded and cursed, by the apostles of temperance as two giant enemies of human happiness, products of—vegetable or animal?

Science and time-honored custom point out plainly then, that man is naturally constituted to live upon a mixed diet, consisting of animal and vegetable food, if the upkeep of his muscular and nervous energy at a normal standard is desirable, although he can sustain life, not of course, in its normal vigour, with a bare vegetable or animal food.

REPORT OF SURGICAL OPERATIONS PERFORMED AND MEDICAL WORK DONE DURING 1894-95 IN THE JUNAGADH STATE HOSPITAL.

By T. M. SHAH, L.M.S.

Chief Medical Officer, Junagadh.

(Continued from page 44, Vol. IX.)

TWENTY-THREE cases of Cancer were admitted:—4 of the breast, 3 of the penis, 2 of the eye, 2 of the lip, 4 of the lower limb, 1 of the tongue, and others affecting different parts of the body.

Of the 4 cancers of the breast, 5 were in females and 1 in a male: 1 female had the tumour removed from the left breast two years before, but it recurred and she was admitted in November 1894. There was no cancerous oedema nor glandular enlargement in the axilla, and no infiltration of the surrounding part, but its recurrence was indicative of malignancy. It was dissected out, the wound healed, and the patient was discharged apparently well.

2. JASAI RAM had a large, deep, foul, ulcerated growth of the right breast. It was removed on the 2nd June 1894, and the patient discharged apparently well on the 18th.

3. PRAKASH had the left breast affected with a large warty, hard growth. It was removed on the 5th December 1894. The wound healed well and the patient was discharged apparently well on the 25th.

4. ANAND CHHEL, aged 67 years, had an ulcerated, hard, scirrhous mass on the left side of the chest with enlargement of the axillary glands; the growth was about the size of a pomegranate. It was removed on the 13th September 1894. Patient discharged apparently well on the 23rd.

These cases of Penile Cancer were treated. First: BHO DEBAR, aged 45, had his whole penis involved in an epithelioma with enlargement of the glands in the groin. On May 1894.—The penis was amputated at its base, the urethra was then separated from the other tissues and left hanging in front of the scrotum. The rest of the stump was skinned over and sutured up. Discharged well on 17th June 1894.

2. KUNDA MATHI, aged 30, had cancer of the anterior part of the penis for 3 months, the glands were not enlarged. 1st March 1894.—Anterior half of the penis amputated. The urethra was then dissected up and left in front of the scrotum, and the penile stump sutured, the patient was discharged well on the 16th March 1894.

3. KALA LIMBA, aged 25, admitted 8th November 1894 with a cancerous growth affecting the root of the penis, glands in the groin enlarged. His penis was amputated a few months before, but the disease had recurred in the stump. The affected portion was excised, then a vertical incision was made in the raphe of the scrotum. The urethra was dissected out, and was sutured to the perineal skin. Patient discharged cured, 10th December.

Cancer affecting other parts.—1. KALA NABSHI, aged 40 had a fungoid mass on the dorsum of right foot on 28th December 1894; it was excised. The patient was discharged from hospital on 25th January 1895.

2. SHAIK MOHAMED, aged 36, had an ulcerated fungoid growth on the left thigh. It was about the size of a coconut, and it was said to have attained this size in 6 weeks; there was no enlargement of glands and no infiltration of the surrounding tissues. On the 25th February 1895, the growth was excised and the patient discharged apparently well on the 1st March 1895.

3. DAYO KANJI, aged 50, had an ulcerated cancerous growth of the size of a lemon on the upper part of the right buttock. On the 30th September 1894 the growth was excised and the patient discharged well.

4. SUNO RUNA, aged 50, had a cancerous growth on the right forearm which was amputated at its upper third on the 17th August 1894. The patient was discharged well on 9th September.

5. ANDEREMAN, male, aged 50, had an ulcerated recurrent growth of the size of a mango on the back. A growth from the same part was removed five months ago. The present growth was excised on the 1st October 1894. An induration is now noticed in the right axilla.

6. L. P., aged 25, suffered from an epitheliomatous ulcer of the upper lip, which was detached over a considerable area and remained hanging in front of the lower lip; the columna and septum of the nose were wanting. Two glands under the lower jaw were wanting. There was no history of syphilis. The ulcer was scorped and an attempt made to replace the lip by union to its original position, but this failed, and the lip had to be subsequently excised.

7. G. R., a female, aged 35, had a nodulated tumour over the hypogastrium, which was removed on the 20th August 1894. She was re-admitted on 1st February 1895 with an ulcerated fungoid growth of the size of a mango, at its former seat. She was anaesthetized and the growth removed again.

8. BODENT ULCER.—GITA PRANOTTAS, aged 45, was admitted on 21st July 1894 with an extensive rodent ulcer situated over the left buttock. The glands in the left groin were enlarged. He was placed under chloroform and the ulcer

several days. He had a sharp attack of dysenteric diarrhoea and made a fairly recovery, and was discharged in October.

He was re-admitted in November with re-appearance of the ulcer of the left buttock, (reaching the verge of the anus); the patient was placed under chloroform, and the tissues affected were thoroughly removed by the knife. Patient was discharged cured on 11th January 1895.

Thirteen cases of *mycetoma* were admitted this year; 8 of them were of the white variety and 5 of the black; 9 of them were in males and 4 in females. In 5 cases legs were amputated, in 2 cases Syme's amputation was performed and in 5 cases excision of the mycetomatous growth was performed; in 12 cases the feet were affected, in 1 the little finger of the right hand as well as of the left hand was affected. She was a female barber by caste. One patient absented.

Naso-Pharyngeal Tumour.—G. B., a child *et.* 10 years, was brought in October 1894 with a large growth in the right nostril which pressed upon the palate and protruded through the posterior nares; the child was placed under chloroform, and the growth removed by an *ectrasour* through the mouth. Its base could not be removed thoroughly owing to its intimate connection with the sphenoid. A large polypus was also got rid of from the anterior nostril.

2. PARBAT, aged 40 years, came in August 1894 with a tumour in the left cavity of the nose. The tumour was hard, the size of a hen's egg. The left nasal cavity entirely filled up the nose and appeared curved to the right. The tumour extended from the root of the nose to the alar margin below, and the malar bone externally.

The patient was placed under chloroform, and a vertical incision was made a little on the left side of the nose, the cartilage cut through, and the tumour gouged out. It arose from the root and anterior wall of the nose and extended nearly to the posterior nares. *Liquor Ferri* was applied to the surface after its removal. The wound was then closed, and healed by first intention.

Injuries.—DAVOOD SALEMAN, aged 36, received multiple injuries by a fall on 10th April 1894. There were three wounds over the scalp, one wound over the cheek, one wound of the shoulder with contusion of the chest and abdomen, and fracture of a rib.

On the 11th urine had to be withdrawn by a catheter. *Emphysema* appeared all over the chest, and the patient died in the evening.

2. JETHO JAGO sustained on the 21st April 1894 a fracture of the left thigh with dislocation of the left knee. The dislocation was reduced, the fracture set, and the limb placed under splints. Discharged well on 24th May 1894.

3. BHANI YASHNAM received on 27th April 1894 multiple injuries by a fall in a stone quarry:—wound on the right temple; second phalanx of the right middle finger dislocated; the lower end of the right ulna was fractured and the right femur was broken at its upper third.

The dislocation was reduced, the fracture set, and splints applied. Wounds were dressed and the patient, who was in a critical state on admission, was discharged well on 24th May.

4. HARSH PARIK, female, was injured by a railway train on 7th May 1894 and sustained a dislocation of the left elbow; fracture of the radius, and a large wound in the left shoulder. The dislocation was reduced and the limb placed in splints. Discharged well on 30th May 1894.

5. BANGORA UMAR, female, aged 35, sustained a compound fracture of the right forearm on 14th June 1894. The wound was dressed and the fracture set. Patient was discharged well on 10th July 1894.

6. RAJO SUBO, aged 35, admitted into hospital on the 18th April 1894 with fracture of the right olecranon. The fracture took place four months ago, and only fibrous union had taken place. A marked depression was found between the olecranon and upper part of the ulna and the forearm was bent. The right forearm could not be extended without the help of the other hand; this forearm fell flat when brought to a right angle, and it could not be extended and brought perpendicularly to the side of the head. The fracture was caused by the blow of a stick.

Operation.—The patient was placed under chloroform, and a vertical incision made over the seat of fracture; holes were drilled above the fragments, which were then united by silver wire. The limb was then placed upon a straight splint, and in the course of a month firm union took place, and the patient gradually regained the power of extension.

7. B. A., female, had an ununited fracture of the right forearm; the limb was swollen and painful, there was no history of an accident. The limb was placed under a plaster of Paris bandage, when the swelling and pain disappeared.

8. MUNA KEMAN received on 5th May 1894 a severe lacerated wound of the right forearm by the bite of a horse. The ulna and radius were dislocated from the right wrist-joint, their ends protruding on the dorsal aspect to the extent of 3 inches; muscles and tendons were torn. The protruding portions of bone were excised and the patient made a slow recovery with a deformed limb.

9. PARSHOTTAM DEVI, aged 10, had a contused and lacerated wound, together with fracture of the right humerus owing to a railway wheel running over it. The parents would not allow any interference with the wound, even when the limb became gangrenous. The child then had tetanus and was removed from the hospital by the parents.

10. **Compound fracture of skull; trephining; recovery.**—On 31st January 1895, P. R., child *et.* 5 years, sustained a fall from a height of 15 feet which caused a wound of the forehead above the right eyebrow. He was conscious. The wound was dressed, but in about half an hour tonic convulsions supervened. The right eye-lid became swollen the muscles of the face twitched and caused distortion of features and foaming at the mouth; the pupils were dilated, breathing became stertorous, and the pulse rapid.

It was evident that there was compression of the brain, most probably due to hemorrhage, as the symptoms of compression supervened some time after the accident.

The child was therefore chloroformed, dressing and sutures were removed, a V-shaped incision made and the skin of the forehead reflected when the skull was found fractured. A small portion of the frontal bone just

where the right splinter was splintered and depressed; another semi-circular line of fracture passed upwards and inwards just outside this line. The pin was fixed and the frontal bone fractured. On the removal of the circular disc of bone, the dura mater was exposed, but no blood clot was found beneath. The dura mater was punctured with the knife, but no extravasation was detected. The depressed splinter of bone was raised and the wound sutured and dressed. Ice bags were applied constantly to the head.

Convulsions ceased after the operation. The highest temperature on the 3rd February 1895 was 100° and pulse 112. They then subsided to normal and the child became conscious. On the third day he took liquid food the bowels were made to act by calomel, and recovery was complete within ten days. Sutures were removed on the 12th February; about $\frac{1}{4}$ a dram of watery, clear liquid ran out of one of the suture openings, but the wound healed by first intention. Discharged well.

One case of *snake-bite* was treated with strychnine injections. Patient was an adult and was bitten during the day time, but the nature of the snake was not ascertained. He was bitten on the leg and a ligature was at once applied above the seat of puncture. When the patient came to the hospital within an hour of the infliction of the bite, he was quite conscious, but a little drowsy with slight thickness of speech. Three injections of strychnine of 15 minims each were given within an hour, after which he began to get twitchings of the muscles; shortly afterwards cold water was repeatedly drenched when the patient evinced rapid convulsions and died.

I am doubtful whether he died purely of snake poison or as the result of the strychnine injections. The value of strychnine as an antidote to snake poison has, however, been exploded by the experiments of Dr. ELLIOT of Madras.

Hydrophobia.—Two cases of this dreadful disease came under observation. One was an elderly man in whom symptoms of rabies manifested themselves on the 30th day after the bite. Emema of milk with lime water was given, also the Bouvason bath, but he died the next day. Another was a child 6 years of age, in whom hydrophobia developed two months after the bite of a puppy. Treatment was of no avail. In both these instances, the dogs were not known to be rabid at the time of inflicting the bite.

Chloroform poisoning; Recovery.—NARAN KALA, aged 3 years, while a vesical calculus was being crushed on the 24th May 1894, became suddenly pale, the respiration ceased, the pulse at the wrist also failed. Artificial respiration and cold douches were continued for 2 minutes but they had no effect in establishing the respiration; electricity was then applied over the cardiac region, while the head was kept hanging over the edge of the table, and artificial respiration resumed. In about another minute, a gasp was observed, a few seconds after another gasp took place, and gradually, regular respiration was established and the color of the face began to appear, but on relinquishing the electric treatment again to fail. Efforts were therefore made to induce vomiting, the boy was brought back from the very jaws of death.

He then vomited copiously, and a gasp was observed, and stating that the ball had come off the head of the boy. The child was then given a mixture of chloroform and ether and the operation was quickly completed by lithotomy.

2. K. R. was nearly dying of chloroform poisoning during a stone operation on 29th August 1894. Respiration ceased on replenishing the chloroform inhaler. Artificial respiration, electricity, and the cold douch were persistently applied for five minutes and succeeded in establishing the respiration.

Aneurism.—A. N. was admitted with a large tumour about the size of a cocoanut in the upper part of the right side of the chest and neck. On October 3rd 1894 the clavicle was "buried" in it. It was pulsating and evidently aneurismal. It was daily increasing in size. Extending down the chest and towards the axilla it measured 28 inches in circumference. Iodide of potassium was given internally, as operative interference was out of question owing to its situation. Pressure could not check its growth, and it was painful. Patient could not sleep. Twenty minims of liquor ferri perchloride were injected into the sac, whereupon the patient immediately dropped dead.

On *post mortem* examination a coagulum was found in the left ventricle and the aneurism arose from between the right carotid and innominate arteries.

Rhinoplastic operations were performed on 32 patients, 4 among them being males and 28 females. In one of them (male) rhinoplasty had been performed at another hospital, as a result of which the nose was deformed and the nostrils closed; in the present operation the nostrils were re-opened.

In the three other cases reparation was made by cheek flap, while in all the 28 female cases the forehead flap was utilized for repair.

In 27 cases the nose was cut off by knife or razor, in 2 by nut crackers, in 2 it was bitten off, and in 1 it was cut off by a sword.

Cheiloplasty, or reparation of the lip, was made in 4 cases. In two cases the lip was repaired by dissecting up a flap from the cheek, and in the other 2 the everted upper lip was brought down by incising the cleatrix and grafting in skin in the gaping wound.

A MIRROR OF PRACTICE

A CASE OF TETANY (?)

By JOE P. BARDOZA, M.B., D.M. (Edin.)

Medical Officer, North Mysore Planters' Association.

THE following case showing very marked and curious nervous symptoms, came under my observation. I do not presume to a definite diagnosis, but content myself to describe the signs and symptoms, with the progress and termination of the disease.

My patient was a thin sparely built girl of a nervous type, nine years of age, and with no previous history of serious illness. There was no family history of any nervous disease—Alcoholism, tabercle or syphilis. No signs of ear disease or rickets could be detected, and there was no suspicion of intoxication by arsenic or strychnine. The child was pale, thin, and nervous.

On the 10th of January, she had an attack of illness lasting five or six days, when giddiness, vomiting, hunger, and fever of a low type were the chief symptoms. She had two more such attacks in February and March, with some pain and swelling in the gums and tonsils and glands of the neck, superadded to the other symptoms. There was also some unsteadiness of gait, she was apt to stumble on rising or walking. These attacks also lasted about a week. She was well in the intervals.

History of present attack.—On the 16th of April, in the afternoon, the child grew languid and drowsy, complained of muscular pains, later on she felt giddy, vomited and had some diarrhoea. She was weak and kept to her room. The next day she entered on a new phase of her illness. She had what is described by her friends as momentary fits of unconsciousness, which I depict elsewhere as the "petit mal". On the third day of her illness, in the afternoon she said, "she felt cold." A minute after she fell back into a convulsive seizure which I shall call for convenience sake, the "grande seizure". The fit lasted half an hour. She woke quite well and cheerful, and on being questioned denied any knowledge of what had happened. The fit was repeated in the afternoons of the next two days. For three days afterwards she had no fit, but complained of her old symptoms. For the next five days she had a fit every day and complained of some pain in the spine in the cervico-dorsal and upper dorsal regions. Twice at the closure of the seizure she woke up laughing and suffered from hallucinations, calling on imaginary babies to play with her. She had no seizures for the next four days, but still remained unsatisfactory otherwise. She could not be trusted alone for fear of stumbling and falling. She seldom walked, as she was very unsteady. On the 30th of April she took fright at a barking dog and the next day she once more had a fit. She was then placed under my care.

Examination.—The child seemed very ill with a shrunken face, puffy lids and dark rings round her eyes. She was anæmic. Her conjunctivæ were slightly yellow. She was timid and irritable, could be induced with great difficulty to walk, and then she stumbled from weakness and giddiness. There was no inco-ordination of muscles, which were tested. The tongue was furred, yellow and slimy. The bowels loose and variable in color and appearance, and very offensive in smell. There was some pain round the navel on pressure, and vomiting was present after food. The vomiting was effortless and spontaneous, only a small and evidently the last portion of each meal being ejected. She complained of languor and weakness, headache and a feeling of tingling and numbness in her legs. Her sleep was good. She was never disturbed by a fit at night.

On physical examination.—Nothing special could be detected, the pupils were normal and acted well. The reflexes were not altered. The heart was weak in action. The pulse was small and soft. The skin was dry, rough and sticky to touch (as on the legs and arms). The urine contained some albumen. The condition of the thyroid was not altered.

Special notes representative of studying the case, and I shall describe the treatment and its results. During the

course of the day the child, who appeared frightened and fagged, would, while talking, or playing, fall back with eyelids tightly closed, a collection of frothy saliva would gather round the mouth which would flow away. To the casual observer she seemed perfectly unconscious and rigid. She could however be roused and resisted angrily any attempts to awake her or to open her eyes, and if it was persisted in, she would moan and cry in a half-conscious manner. The face was calm and placid if undisturbed, and of ordinary colour. The legs were often extended rigidly and the toes pointed; but no clonic spasms ever occurred. In 2 or 3 minutes she awoke, often with an angry exclamation at her helplessly condition, and would accuse somebody of throwing water on her. She generally had two or three such attacks a day. This fit I call the *petite mal* in contradistinction to the grand seizure I am about to describe.

The *grande* was always ushered in with a feeling of chill, persistent yawning or hiccups. She then passed through the *petite* stage to one of convulsive spasm. The muscles of her face twitched occasionally and her arms were slightly adducted to the sides of her body or crossed over her abdomen, the wrists flexed and her hands clenched with the thumbs turned in, while the muscles of the arm were thrown into fine rhythmic contractions. The legs were held rigid, the ankles extended, and the toes flexed into the soles of her feet. No clonic contractions occurred here. The pupils were normal and her pulse unaffected. The respiration was unaffected except when harassed by the hiccups. There was in addition the frothy saliva of the *petite* stage. The seizure lasted 20 or 30 minutes, hiccups or yawning terminated the fit, and she woke up in a half-dazed manner.

Very often violent and convulsive hiccups complicated the seizure throughout; or took its place. On one occasion this became so frequent, noisy and crowing that it became alarming. It lasted over a very distressful hour and was not controlled by chloral, bromides, musk or large doses of ergot. I chloroformed her and was then successful, only when I proceeded to deeply narcotise her. I feared a fatal ending from prolonged spasm of the diaphragm and failure of respiration. She had to be kept deeply narcotised for 15 minutes and then allowed to sleep it off.

These fits occurred in the afternoons, and she was the better after them, being less drowsy and more cheerful. These different phenomena could be averted if her attention was sufficiently diverted, and on one occasion I stopped a "grand" seizure by vigorous dashing of cold water and the moral control of her father.

During the course of my observation, her unsteadiness of gait terminated in utter inability to walk, and she could not be persuaded even to stand on her feet. She said her feet tingled, and if forced to put them to the ground, they developed a hysterical variety of talipes varus.

Progress of the case and treatment.—Careful treatment by purgatives, dieting and vermifuges disclosed no worms. Bromides in large doses had no effect. Chloral, musk and other sedatives also failed. I was then led to try, as far as it was possible in a sympathetic household, the force

of mental treatment, cheerful companionship and the instilling of self-confidence. Frequent doses of castor oil cured the gastric irritation. I then put her on Parriah's food and large doses of Fowler's solution, 5 to 10 minims twice daily. The "grande" seizures stopped. She gained confidence in standing and walking. Her tongue cleared and she began to look more like herself. The hiccups in a modified degree persisted and the saliva collected frothily during sleep. Her temper was still irritable. The characteristic vomiting was seen occasionally. On the 15th May she was up and playing but was subject to hiccups and other minor evils. I have since heard that she had one seizure very slightly but is otherwise well now, but parent is fearful of recurrence.

Observations on the case—Such varied symptoms are usually ascribed to worms, and in such cases of children in India one first explores that hypothesis. Your readers will observe points in the history and description as given by the relatives, which would suggest "Epilepsy." This disease often makes its first appearance in childhood. The unconsciousness was however, not perfect, and the foaming but an excessive salivation from some reflex cause, the saliva being half consciously churned up into froth. The fits and the expression of the face were unlike those of epilepsy. The clonic spasms were bilateral, peculiar, and confined to the upper extremities, while the lower showed rigidity. There was no biting of the tongue or any other injury sustained. There are other points in the history, &c. I need not dwell on. Tetany, I presume is a rare disease in India. Certain points in my case point strongly to it. The "grande" seizure is characteristic of the spasms of tetany. The feeling of tingling and numbness in the legs, the inability to walk, the gastro-intestinal irritation, &c.

The subject was such as is prone to tetany, viz., "anaemic, nervous, and excitable." The spasms were not controlled by hot baths, bromides or other sedatives, nor by chloroform (unless pushed dangerously) but were amenable to cold douching. There were however, no signs of rickets nor did I elicit the signs given by TROUSNEAU and ARERCHOMIE. The thyroid was unfortunately not examined. The other symptoms as "hiccups, giddiness, salivation, dryness of skin and scaling, puffiness of lids, &c." may be explained by the theory of implication of the thyroid, derangement of whose function sets up the disease. DR. BYRON BRANWELL of Edinburgh and GOLSTEIN of Leipzig aver- atrophy of the thyroid and the suspension of its functions, with perhaps a circulation of a mucin-like substance as a cause of tetany. There is very little doubt that the Thyroid has important functions as a burnisher of the nervous mechanism. They advocate a thyroid extract treatment.

Lastly, there is a disease erroneously confounded with malingering and the "dernier resort" of the puzzled and baffled physician. Hysteria, a disease unfortunately becoming very common in these go-a-head days. There is much in the varied and varying symptoms and in the moral treatment of the case that is highly suggestive. Objections in respect of age are not unanswerable. Neither age nor sex is a barrier. It attacks the growing girl and the maiden boy; the sentimental maid and the impressionable youth; while the faded matron and the graven crone are not exempt.

HEPATIC ABSCESS: INCISION: RECOVERY.

By ASSISTANT-SURGEON H. M. PANDORI, A.M.S.

Gondar.

PANDORI, H. M. *et.* 30 years, suffered from malarial fever off and on for two years. Notwithstanding this he enjoyed fair health till about a month before his admission into the hospital, when he got an attack of bloody dysentery, which lasted for ten days, towards the close of which the patient felt some vague sensations of pain in the hepatic region, and occasional shivering fever. He was brought to the hospital on 10th June 1895. He was pale and considerably emaciated, but did not seem to attach much importance to his hepatic trouble. He had come to be treated for general weakness, as the result of long-continued malarial fever. His sclerotics were slightly jaundiced and his pulse febrile. The patient complained of slight cough and pain on the right side of the chest on coughing. Superficial examination revealed some fulness over the hepatic region, and on examining more closely, the liver and the spleen were found to be enlarged. Some deep fluctuation was also detected over the liver.

Taking the previous history and the present condition of the patient into consideration, it was not difficult to form an opinion about the nature of the case, and the exploring needle soon settled the matter definitely. The patient was at once put under chloroform and a free incision made in the interspace between the 9th and the 10th ribs on the right side. About four pints of thick pus was removed. The abscess occupied the right lobe of the liver, and on introducing the finger the walls of the abscess-cavity could not be reached in any direction. The cavity was thoroughly washed out with carbolic lotion and a large drainage tube inserted. Improvement set in rapidly from the time of the operation. The temperature remained normal till the 24th, when it went up suddenly to 104°, going down to normal again next morning.

The abscess-cavity was daily irrigated with iodine lotion—which I find in my practice the best and the most efficient antiseptic lotion for checking discharges. The cavity went on healing without any interruption, and the patient was discharged cured, on the 6th July. He had improved wonderfully, and the spleen had also gone down in size.

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TWO CASES OF CASTOR-OIL POISONING.

By BANKIM BEHARI CHATTERJEE, L.M.S.

Bali.

For the benefit of other practitioners, I give the following two cases of castor-oil poisoning which came under my treatment:—

The seeds of *ricinus communis* contain an active principle called *ricin*, which if not extracted from the oil and used pure, produces severe gastro-enteric disturbances, viz., vomiting, purging, collapse and even death. The ordinary benzoin oil contains the same irritating substance, and on an account should it be given internally.

The drug vendors now-a-days, without looking to the safety of the patients, sell the ordinary oil, at a cheap rate. The oil is simply filtered through blotting paper.

The ignorant people buy it for its cheapness and suffer in consequence.

Two cases are cited in illustration.

Case No. 1.—On the night of the 14th October 1894 I was called to see a Hindu boy, aged about 2 years. The father stated that a dose of ordinary bazaar oil had been given to move the bowels.

I observed the following symptoms :—

Patient discharging bloody stools with great pain. Pulse quiet and compressible, voice inaudible, intense thirst, and restlessness. The extremities were cold but the temperature in the axilla was normal.

Treatment.—Ice to suck ; perfect rest. A mixture containing bismuth and hazeline was given within half-an-hour ; the boy voided 4 more bloody stools and collapsed with a cold and clammy perspiration all over the body ; pulse nil at the wrist. Temperature 95° F. in the axilla.

Friction with fingers all over the body and other measures to generate heat were adopted.

Pulse and temperature gradually came round to their normal standard.

The boy after all made a recovery.

Case No. 2.—A Hindu boy, aged about 6 years, was suffering from an attack of acute dysentery. To clear the offending materials from the intestine, a dose of castor-oil was given with the result that violent gastro-enteric disturbance at once ensued.

The bloody stools and vomiting increased in number and frequency. In spite of very energetic treatment adopted the child died of exhaustion and gangrene of the bowels.

Remarks.—My object of bringing these two cases before the profession is with a view to the sale of impure and adulterated drugs being checked by law owing to the troubles they bring upon both the patient and physician.

AN INTERESTING CASE OF SUDDEN AND FATAL DIABETES.

By JAMES HARRIS, L.M.S.

Madras.

A STRONG powerful man of forty was seen walking about the street, to all appearance in perfect health, only five days before he sought medical aid. When he saw me, he complained of extreme weakness brought on, as he thought, by frequently micturating the previous night. He suspected, he said, sugar in the urine some days ago as the ants were attracted by it. His expression was troubled and indicated great anxiety. The heart was weak and excited. The full expansion of the lungs wanting, the respiration was shallow. The muscles once hard and defined were soft and shapeless. The urine was light with a specific gravity of 1030. Contained sugar—about 12 grains to an ounce. *There was no acetone.* I put him at once on codsea combined with sulphate of zinc, arseniate of quinine and nux vomica, which I have found to be of invaluable use in almost all similar cases. The next morning the patient, being unable to see me in my rooms, sent for me. I was surprised to see him so reduced in 24 hours. He said he passed urine in large quantities almost every 10 minutes. His thirst was painfully unbearable. The occasional sipping of a little glycerine allayed it a little. Small quantities of broth with a teaspoonful of brandy were ordered every hour.

In the evening the patient was lying thoroughly helpless. *Pulse* weak and small. *Respiration* shallow and hurried.

The third morning the specific gravity of the urine was 1025. The patient became unrecognisably thin. His speech was a whisper. He recognised friends by signs. A stimulant mixture revived him a little. I visited him at 11 A.M. to see him dying. He was conscious until the last moment. There were no symptoms of the usual coma in diabetes. The rapid loss of the functions of the vital organs brought on by the incessant uncontrollable drain on the system so unexpectedly closed the scene.

The following can be surmised as the cause of this painful end :—

(1). He was for some time in great mental anxiety occasioned by the loss of some jewels, his sole treasure on earth.

(2). He was already diabetic, though in a mild form.

(3). As the exciting cause of this uncontrollable discharge of the urine can be mentioned the sudden change of the weather from extreme heat to cold by an unexpected shower. Many complained of the effect it had on their kidneys, but while in them it was only a physiological phenomenon, proved disastrous in the case of this unfortunate patient.

A CASE OF YELLOW OLEANDER POISONING : RECOVERY.

By ASST.-SURGEON ROMANATH DEY, M.B.

Madaripur.

M. A., Hindu female, aged about 25 years, was brought into hospital by her husband on the 4th July 1895 at 10 A.M. in a state of collapse, suffering from the symptoms of acute yellow oleander (*Thevetia Nerifolia*) poisoning.

The patient on admission stated that as she was suffering from flatulency and constipation for a couple of days previously, she had taken that morning a bit of the seed of the fruit of yellow oleander with a belief that this would move her bowels and relieve flatulency. About half an hour after she had taken the seed, she began to purge and vomit, and in a short time became thoroughly prostrated. Her husband then had her removed to the hospital.

Condition on admission.—Body covered with cold and clammy perspiration. No pulse at the wrist. Pupils dilated. Voice very feeble. Frequent nausea and vomiting with severe pain in the stomach, was rather drowsy.

Treatment.—The stomach was thoroughly washed with stomach pump and hot bottles were applied to the extremities. Stimulant mixture was given every hour, but this could not be retained for the first two or three doses. Spitz's half a drachm was injected hypodermically once at 11 A.M. and again at 12 noon. At 1 P.M. the pulse was faintly perceptible and the body became gradually warm, but the vomiting with pain in the stomach continued still, as no eggs were available at the time, milk thickened with barley was given at short intervals, which to a great extent relieved nausea and vomiting. At 2 P.M. pulse became distinctively perceptible and vomiting was less than before ; 4 P.M. the same ; 6 P.M. pulse good and regular, vomiting and pain in the stomach less ; 9 P.M. vomited once. During the rest of the night vomited twice, and was rather restless.

5th July.—Had one soft feculent stool at 6 A.M. No vomiting. Pupils dilated still. Since then she made an uninterrupted recovery and was discharged cured on the 8th July.

Remarks.—Poisoning by *Nerium Thevetia* is very rare. I have seen only one other case, about 12 or 13 years ago, in a lad who died from its effects, and on whose body a post-mortem examination was held by my revered uncle Rai Kanny Lal Dey Bahadur, C.I.E., when he was Teacher of Medical Jurisprudence in the Campbell Medical School at Calcutta.

The poisonous nature of the drug was up to this time quite unknown to the people of this part of the country.

THE Indian Medical Record.

16th August, 1888.

SIR WILLIAM ROBERTS, M.D., F. R. S., ON THE
GENERAL FEATURES AND THE MEDICAL
ASPECTS OF THE OPIUM HABIT IN INDIA,
AND THE RECKLESSNESS OF THE
EVIDENCE ON WHICH HIS CON-
CLUSIONS ARE BASED.

III.

The opium habit and food.—That any beneficial relationship, apart from medicinal uses, should be traced between opium, a narcotic poison and food, was left for the Royal Commission on opium to discover. It will amuse the readers of this journal if it does not interest them, to follow the medical expert in his endeavours to explain and defend the beneficial effects, which he maintains, the starving ryots of Orissa and Assam derive from the use of "opium as an economiser of food." We omit the Bengal ryot proper advisedly, for he has not yet learned to avail himself of this drug as a food accessory, to ameliorate his hard lot. This subject is referred to as follows in the medical memorandum. "The Commission were frequently told that people who were well off and had plenty of good food tolerated the opium habit with impunity, whereas the poor with an insufficient supply of food suffered from it. On the other hand, we were often told that opium ameliorated the lot of the underfed man and enabled him to live longer and better with a scanty diet." Or that the half-starved ryot—able in times of scarcity to obtain only one meal a day—is not only benefited by eating opium, but that the opium habit "ameliorates his lot" and enables him to live longer and better with a scanty diet! It will help us to appreciate the worthlessness of this statement and enable us to estimate it at its true value, if we trace it to its original source. The earliest medical reference to opium in relation to food in India, is found in a paper written by Dr. VINCENT RICHARDS, who was Civil Surgeon of Balasore in Orissa. He found the opium habit very prevalent in Balasore, and inferred that the people had acquired the habit during the terrible famine of 1866. Apparently, he was not aware that the habit of opium-eating in that district dated back to the time of the East India Company, when opium was cultivated in Orissa. It was in 1778 "that WARREN HASTINGS, Governor of Bengal, assumed on behalf of the East India Company a monopoly of all the opium produced in Bengal, Behar and Orissa." (East India Opium, page 22). The habit had existed and was widespread in Balasore, as it is at the present day, long before the famine of 1866: but Dr. RICHARDS finding the ryots addicted to the use of the drug, could only account for it by supposing that the hungry ryot began it to allay the pangs of hunger. No doubt he found some who had little means wherewith to buy food, spent part of that little on opium—for next to the cravings of hunger itself must be placed the unnatural cravings of the opium habit—but to suppose that the starving ryot, unable to buy food for himself and his family,—and who had never before used opium—

should begin the habit with his last few rupees, is not only highly improbable, but manifestly impossible. The starving ryots had neither money nor food during the famine; (opium is dear in that province) and we are not aware that the British Government ever ordered the free distribution of opium during that or any subsequent famine, to alleviate the miseries of the starving ryots. The absurd theory of opium as an "economiser of food" was thus generated in error, fostered by official interest, and is sought to be made acceptable to the public by SIR WILLIAM ROBERTS in this Medical Memorandum. This newly discovered and unlooked-for beneficial property of opium was at once eagerly seized upon as a plea for justifying the existence and furthering the extension of the traffic in the drug. Its virtues as a dietetic, its potency and staying powers were voiced loudly by medical officials in the press at home and in India, culminating in the astounding verdict of the memoirs before us—a monument alike of misguided talent and biased judgement—"that opium ameliorated the lot of the underfed man and enabled him to live longer and better with a scanty diet."

The evidence taken from the lips of a retired Deputy Collector, himself a native of Orissa, who was on relief duty during the famine of 1866 is conclusive on this point. Question: "Did you ever hear the starving people ask for opium to allay the pangs of hunger?" Answer: *No, I never heard of that, their one cry was "rice! rice!" &c.* The theory of opium as an economiser of food is clearly traceable to one of those careless, thoughtless, absurd statements frequently found current among irresponsible and superficial observers; but which should never find a place in the pages of the Report of a Royal Commission. To compare opium with alcoholic beverages and tea and coffee will not bear examination. The fluid and bulky form and the nutritious and stimulating properties of these food accessories as used in Europe, render comparison with the nervous narcotic—the bulk of which is only a few grains—inadmissible. The effects of opium are purely nervous, that of tea, coffee cocoa and alcoholic beverages, as used with food, stimulating, and satisfying because of their bulky form occupying a large part of the space allotted to food in the stomach. Opium, on the other hand, by its inhibitory action on the secretions of the stomach, and its paralyzing influence on the peristaltic movements of that viscus, hinders its due performance of the digestive function. Dr. BURNEY YEO notices this action of opium as a possible cause of gastritis. He says: "The continued use of narcotics, such as opium, by diminishing both the secreting and propelling forces of the stomach may lead to retention and abnormal decomposition of ingesta and so excite gastritis" (Manual of Medical Treatment, page 46). We have frequently conversed with opium eaters, but we never found any one of them even hint that opium economised his food, except in the way of diminishing his scant income and thus leaving him less for food for himself and his family. Any encroachment on his food-supply speedily tells on his own constitution and that of his starving family. The chronic constipation and emaciation which accompany the opium habit are doubtless in some degree

equated by the kind of food stuffs which the well-to-do opium-eater can afford to procure, viz.—milk, ghee and *subulmanis*. It is not, however, altogether on that account that milk is selected as a necessary article of diet, without which the opium-eater soon shrivels up; it is rather on account of the inability of the stomach to deal with large quantities of rice and vegetables, which constitute his daily food. We cannot do better than quote Sir WILLIAM ROBERT'S own lectures on dietetics to explain the reason why milk is selected by the opium-eater as a necessary and almost exclusive form of diet. Writing of gastric and intestinal digestion he says: "*In the seriously sick (and opium-eaters) with an almost paralysed stomach milk is not meddled with in that vianus. There is neither pepsin nor acid to curdle it, and it passes as a flowing liquid into the duodenum. Arrived there it encounters the secretions of the still active pancreas, and as I have before remarked, milk is especially amenable to the action of the pancreatic juice.*" This seems to be the true explanation of the opium-eater's preference for milk as an article of diet when he can get it.

Another theory—a favorite one with the writer of this memorandum—is that opium is resorted to by the ryots of Bengal on account of its retarding action on the contents of the stomach.

Dr. COBB, who succeeded Dr. CROMBIE as Civil Surgeon of Dacca, has the unique distinction of making this original observation on the poor ryots of Eastern Bengal—the very districts where the malarial intensity, according to Dr. CROMBIE, necessitated the ryots to possess opium as a household remedy. The observations of Dr. COBB are so fully in accord with Sir WILLIAM ROBERT'S views that we place them side by side, so that the reader may duly appreciate the similarity which is striking and suggestive:—

Sir William Roberts: "For to express the problem in another way it may be said that we render the food by preparation as capable as possible of being completely exhausted of its nutrient properties, and on the other to prevent this nutrient matter from being wastefully hurried through the body we make use of agents (tea, opium, cocaine, alcoholic beverages) which retard the speed of digestion." (Lectures page 65).

Dr. Cobb: "In the damp climate of Eastern Bengal the poor Natives are in the habit of eating largely of rice and a peculiar sensitiveness of the bowels seems to exist in those damp climates. As a man advances in age digestion falls to some extent, and the food is hurried through the intestines. . . . The effect of hurrying food through the intestines is to cause diarrhoea, dysentery and other allied affections. Opium, in small doses prevents this, and it is largely used by the poor in Eastern Bengal."

In dealing with Dr. CROMBIE'S theory of opium as a household remedy we shewed that 1,106 well-to-do opium-eaters, scattered among the six large towns with an aggregate population of 110,000, would account for all the opium consumed in the district of Dacca. The same applies to Dr. COBB'S theory of opium as a retarder of digestion. The ryots do not use opium for any such purpose, for the simple reason that they are not and never were opium-eaters. It is difficult to account for such evidence being seriously placed before the Royal Commission on opium; and equally unaccountable why Sir WILLIAM ROBERTS did not perceive that the evidence tendered by Drs. CROMBIE and COBB was contradictory and mutually destructive. Both witnesses put forward different theories to account for the same habit among the same people and in the same district. The former ascribed the use of opium as a prophylactic to the intensely malarious environment; the latter, only to aid

the failing digestion of advancing years, and both endeavour to account for a habit which does not exist among the ryots in that district outside the city of Dacca itself and the five larger towns scattered over the district.

Still further to strengthen his diastolic theory, He quotes Dr. ELIZABETH BRILLY as stating that "it was a general practice in the Punjab for women to take a small dose of opium (about one grain) just before or with their midday and evening meals as a digestive." But the medical expert might have gone further and asserted that no opium-eater or smoker could take food without first satisfying the opium craving—it is invariably taken before food, but not as "a digestive." The opium constitution generated in the opium-eater is the most imperative and commanding appetite known. As soon as the hour of indulgence comes round, unless the drug is obtained, the opium-eater or smoker is unable to put forth the slightest mental or physical effort. A witness in the witness box, in the midst of his examination, breaks down without it. A whole ship's crew of opium-smoking Chinamen have been known to endanger the safety of the ship and all hands strike through sheer inability to work after their stock of opium had run down; and in such circumstances the medical stock of opium in the medicine chest had to be divided among them to enable them to work the ship into harbour. That is the only relation which opium bears to food and to work. It is neither a "digestive" nor a stimulant to those who have not formed the habit, but keeps the opium slave from sinking down into utter physical and mental helplessness, and drags him up to the low level of his feeble and enervated existence.

Relation of the opium habit to the generative function.—

Rightly or wrongly, the people of India have implicit faith in opium as an aphrodisiac. As such this drug is resorted to when the sexual energy begins to wane, about the age of 45 or 50. It will be found that the habit of eating opium is usually begun about middle life, but smoking opium seems in India to be a habit that is begun at a much earlier age. Sir WILLIAM ROBERTS admits that it is largely a habit of middle age. He says: "It must be remembered that the opium habit is in the main a habit of middle life and advancing years, and is not often practiced in youth and early manhood." Thus shewing clearly that the habit bears no direct relation either to malarial or damp climates on the one hand, or to dry and salubrious climates on the other. It may therefore be accepted that those who have not begun the habit for the alleviation of some painful disorder, such as rheumatism, syphilitic or non-specific, have taken to the habit under the belief that the sexual function would thereby be invigorated and the impotence of advancing age warded off for a time. How far their expectations have been realised by actual experience is a question into the merits of which we do not enter here. Suffice it to say that whether it is that the opium habit leads to sexual indulgence, or that sexual indulgence incites to begin the opium habit, the fact remains indisputable, that the habit is usually associated with the gratification of the lower animal passions. Comparing the diminished fecundity—1½ child for each person—among opium-eaters with the very high birth-rate of 42 per 1,000 in India, the WILLIAM ROBERTS is at a loss to reconcile the seeming anomaly of

these figures. He offers as an explanation that "the congress of the sexes takes place very early in India, and chiefly before the opium-habit has attained much development." This is not the true explanation. If the opium habit were general and widespread among the teeming millions of India, the diminished fecundity of opium-eaters would doubtless affect the national fecundity by lowering the general birth-rate; but the habit is far from general outside the present and past opium-growing regions, and may be said to be limited to a few well-to-do middle aged debauchees, leaving the great mass of the agricultural population as yet untainted with the vice. The policy of the Government by placing licensed shops within the reach of every village, extolling the virtues of the drug as a panacea in every conceivable ailment to which flesh is heir to, is speedily changing the whole aspect of rural India, which must soon imitate the vices and depravity of the cities by indulging in a costly vice that saps individual and national character, degrading and impoverishing its victims as no other vice does.

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THE PHYSICIAN AND THE PRIEST.

CLOSELY allied to the consideration of the physician as a moralist is the question of the relationship that should exist between physicians and ministers of the gospel. Just as the moral good is linked with the spiritual welfare of communities, so do physician and priest stand, as it were, on common ground, having in many respects much the same objects. And as morals are to a greater or less extent, affected and influenced by mental and physical weaknesses with which it is the duty of the physician to deal, it is meet and proper that there should always be attempted a cultivation of the best of relationships between medicine and the church. It is very much to be regretted, however, that this desirable relationship between the members of one and of the other does not exist to the extent that may rightly be expected. In fact, discourtesies are not infrequent: and only too often a very strained and formal appearance of mutual good feeling is maintained. We must admit that the church is invariably well disposed to our profession; and if the profession is not always discourteous to the gown, it unfortunately very often betrays a touchiness, and is very prone to regard as unwarrantable, intrusions on its province, or as personal insults, many acts and attentions which ministers know it to be their bounden duty to perform towards the sick and suffering of their faith.

The mutual relationship between the two professions is at a fairly amicable standard ordinarily; and even in sick chambers of private homes, any demonstration of offence on the part of one or of the other, is controlled out of deference to the wishes of relatives and friends of the patient; but it is in some public institutions—scenes to which the voice of duty summons members of the two callings in equally strong terms—that offence is generally taken, and leads to the discussion of rights and privileges, and of wrongs, supererogations, and intentions that may, by proper reflection and consideration, be avoided. The uncertainty of life and the necessity for being ever ready to meet the "Master's call" are conceded to be

unquestionable: yet when our fellow beings are in the grasp of serious and dangerous illness, and their lives appear to be in the balance, and when in consequence, the spiritual preparedness is all the more desirable, the physician in his zeal and ardour for the restoration of the physical powers of his charges is prone to repress, to some extent at least, those all-important spiritual ministrations of churchmen. Such repression on the part of the medical profession arises almost invariably from the idea that the visit of a minister will be disturbing to the patient, or be suggestive of his case being hopelessly bad, and hence alarming. We do not mean to affirm that it is the universal rule with physicians to endeavour to restrict the visits of ministers to the bed of sickness; nor do we mean even to hint for a moment that physicians, as a rule, have little regard for the spiritual needs of their charges. What we say is that, in many instances, a physician's solicitude for the physical well-being of his patient, and perhaps for his own professional reputation, makes him assume the role of regulator of the actions and duties of ministers. With regard to the minister's visits being disturbing to a patient, we may say that, even if they were disturbing, such disturbance is a necessary evil. Surely ministers are not unreasonable beings. They have a Christian solicitude for the recovery of the sufferer, and will be careful not to worry him more than duty demands. That it is likely there will be found a priest or minister whose zeal may lead him into more than necessary interference with, or disturbance of, a patient is no more justification for the rule that a physician should control the actions and visits of pastors to the sick bed than that physicians should be stigmatized as actually ignoring the spiritual needs of patients, because a few physicians may be found blind and deaf to Christian doctrines. As to the pastor's visit occasioning alarm to a patient as suggestive of his approaching end, we think that this is a mere fancy. Except some painful affection is terminating existence, there appears to be no pain in dying. Most or all of those who have risen from beds of serious illness, in which the end seemed imminent, will almost invariably assert that they experienced no dread of death; and that even with the knowledge that they were in a critical condition, they felt none of those dreads and alarms usually thought to beset the dying. In fact a physician has lately given it as his experience that in the last stages of existence in fatal illness there is experienced a calm composure, and a pleasantness, to feel which, it is worth one's while to go through a bed of serious and painless illness. We do not, however, advise the experiment, nor do we attempt to argue the exactness of the sensations attending those prostrated by sickness, but conventional ideas as to the dire thoughts and painful anxieties afflicting the patient who suspects that his present sickness will be his last, are far from being correct. The dying Christian, then, who has been in communion with his church, always welcomes, even more than he did in health, the visits of his pastor; while to the less godly ones, those visits are received with undisturbed indifference, or bear fruits of self-reproach for the past and amendment for the future. All this may read like a homily, but it is relevant so and closely connected with the consideration of the subject.

in hand, viz. the relationship that ought to exist between physicians and spiritual pastors. As we said before, it is in public institutions under the control of medical men that one is most likely to witness little brushes and frictions between members of the two professions under notice; and we can cite a few instances in which physicians have behaved with downright discourtesy in the wards of our hospitals to priests and parsons. Some physicians of our hospitals assume too much of the rôle of lords and masters of these institutions. They appear to lose sight of the fact that these are public places, to which a public duty calls them and ministers alike—institutions which Christian charity has called into existence, and in which the presence of physician and priest is equally imperative and essential. In fact much of the dread that a patient often evinces to seek admission into a hospital when he is seriously indisposed, is due to the idea that he is likely to be allowed to die there spiritually neglected; and the slightest friction between physician and minister in hospitals is likely to foster that idea in the public mind. Far be it from us to impute boorishness to our hospital staffs, or to impeach the general kindness and courtesy of our profession; but in a few instances in civil and military hospitals, when the province of the physician was supposed to have been intruded upon, or when occasion for offence (if offence it can be called at all), was most unintentionally given by visiting ministers, we have known medical officers to express their displeasure in very hurtful and objectionable ways, instead of talking the matter over in a friendly spirit. It is certainly a great satisfaction to know that these cases are exceptions to the rule; but these exceptions have been rather too frequent to be allowed to pass unnoticed, and must be harmful to the credit of our charitable institutions for medical relief as well as to the profession at large. Cases of this sort should scarcely ever occur; and they certainly will be very few and far between indeed, if physician and priest and minister always kept before them the fact, that the interests of their callings lie more or less in the same directions, and that Christianity demands that they should help each other in their ministrations.

SOME THOUGHTS ON THE STATE OF PREGNANT WOMEN.

It is an accepted fact that with the increase of civilization the diseases incident to pregnancy and parturition also increase; or it may perhaps be more correct to say that with the more civilized nations and with the better classes of society, the dangers and difficulties which beset the pregnant and parturient condition, are more commonly encountered. It is, of course, absurd to argue from this that civilization is an evil. If men and women acted in reasonable accord with the teachings of civilization, and yielded less to vanities and the fascinations of society and of luxurious habits, we would find mothers in general happier, and physically better beings. It is fortunate that the activity of the profession has enabled it to keep fairly pace with the increasing needs of general advance; and that maternity is now largely robbed of its many dolors and evils.

It will be impossible to gauge the amount of misery prevented and relieved by the timely and prudent application to practice, of obstetric and gynaecological teachings. The period of gestation is however, now-a-days, and for that matter has always been, a deal too much permitted to proceed undirected and unhelped throughout its entire duration. Modesty, bashfulness, and such like considerations, very commendable in themselves, are permitted to have unreasonable rule and sway during a very critical and important period of feminine existence. The advice of midwives, incompetent to instruct in the guiding principles, is generally sought, for the alleviation of the many distresses and inconveniences of the parturient condition, while the seeds are being sown of permanent mischief and of danger perhaps to life. A consultation with a medical man, or a specialist if necessary, and the obtaining of competent instructions and adherence thereto will, in a very large percentage of cases, save a mother much distress in the present and in the future. The family physician has it in his power to do much in mitigating and preventing many of the miseries of womanhood. We would therefore commend to careful consideration and for guidance, the rules laid down by Dr. W. B. DEWEES, as to the paramount duties of the obstetrician in the study and care of pregnant women, and as to the moral obligations which must compel the family physician "to promptly do his full duty, by giving adequate instructions concerning the ill effects of improper posture, dress, food, drink, and erroneous habits of living, including the non-forbearance of indiscriminate, excessive and impure sexual indulgences."

These duties are:—

- (1). To discover if the patient be actually pregnant.
- (2). To determine positively if the impregnation be uterine or normal, as contra-distinguished from tubal, abdominal, or abnormal pregnancy.
- (3). To carefully note the pregnant woman's history, including her age, primiparity or multiparity, environments, station in life, general condition of health, period of gestation; as well as her dress, food, drink, and habits of life. To make repeated examinations of the urine and ascertain the temperature from the time pregnancy is established, to the termination of gestation.
- (4). To make a physical examination for the purpose of accurately determining the diameters of the pelvic straits; the symmetry and size of the bony outlet; the integrity, condition and position of the vagina, uterus and other inter-pelvic viscera, and adjacent structures; the state of the abdominal muscles; the presence or absence of hernia, varicose veins, tumors, &c.; the shape, size and condition of the breasts and nipples; the condition of the heart, lungs, mind, stomach, bowels, &c.
- (5). To observe the state of the fœtus, its strength and viability, as well as the implantation of the placenta."

Now if it be essential to the safety and future well-being of the two lives involved, that all these observations should be efficiently made, they must be conducted by, or under the supervision of, duly qualified persons. No reputable obstetrician will gainsay the important bearings of such observations on the progress of gestation, and the safety and consequences of parturition; and in their importance is to be recognised the extent of the moral

obligations of the family physician. The general practitioner will, no doubt, find it both a very delicate and difficult task to carry out these instructions in anything like detail in a case of which he has not been the familiar and regular attendant, but the principles should be kept in view by every medical attendant on a parturient patient, and should be advised or persuasively given effect to as far as possible. The advice indicated in the foregoing rules of Dr. Dawkes are to be tendered as fittingly as possible. This is the duty of the physician who may be consulted in cases of pregnancy, and no considerations should prevent him from doing it. By doing this duty he discharges his moral obligations as far as he is permitted to do, and his patient's reflection on the advice given by him is likely to be followed by her submission and yielding to the professional recommendations. The instructions given in item 3 of the duties of the physician, as laid down by Dr. Dawkes, are perhaps most likely of all others to be submitted to by the parturient female, and most necessary of observance in the majority of cases. We would therefore quote the following rules which it is necessary to insist upon:—

(1). Absolute, regular hours and wholesome environment.

(2). Plain but nutritious and wholesome food and drink, being principally composed of fresh lean meats, fresh fruits, pure milk, and distilled water.

(3). A proper amount of exercise, by walking or light labor on foot, and maintaining the correct erect posture. Whenever infirmity forbids such exercise, recourse should be had to massage, and as much time passed in the open air as is advisable under such unfortunate circumstances. Rest in the recumbent posture after meals and fatiguing efforts, with not less than ten hours' sleep out of every twenty-four.

(4). An open condition of the bowels and skin, which is to be chiefly maintained by proper diet, exercise and bathing, the wearing of flannels, warm low-heeled shoes, and loose garments, and, in rare cases, the proper use of laxatives and hot water enemata.

Analysis of the urine from time to time, and frequent recording of temperature will lead to early recognition, and preventive treatment, of such conditions as dropsy of the lower extremities, oedema of the face and lungs, eclampsia, and even parturial sepsis. Pelvimetry indicated under the fourth head will disclose distorted and contracted conditions, the recognition of which will materially influence both lives, *viz.*, that of the mother and child. We refer to it as Dr. Dawkes departs from traditional teachings, and thinks that the induction of premature labor under such conditions is to be considered a "murderous practice;" and that under these circumstances rational and advanced obstetrics "leaves us to choose principally between but two procedures whenever one finds the pelvis so distorted or contracted that it precludes all possibility of delivering the living child, namely: Sympetomy and Cesarean section." He thinks that the former has but this advantage over the latter, *viz.*, that it is less dangerous to the mother. The mortality of the infants is however less in deliveries by Cesarean

section; and in choosing and deciding between the two operations, Dr. Dawkes would lay down the rule that Symphysectomy should be undertaken only in cases where the conjugate diameter measures at least eight and a half millimeters; and where this measurement is less, Caesarean should be resorted to.

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PRACTICAL POINTS IN TREATING DISEASES OF THE EYE, EAR, NOSE AND THROAT.

As specialism answers far better in a town than it can in a country or district practice, and as the organs of voice, hearing, taste, sight, and smell are so intimately blended that injury to one often reflects heavily on the other, Dr. J. W. PARK tenders a few practical hints for the general practitioner:—(1) The eye should, he thinks, be methodically examined as to: presence or absence of foreign bodies; meridian movability of the eyeballs and of the recti muscles; transparency of the cornea and movability of the iris; and the condition of the conjunctivæ, eyelids, and lachrymal puncta. On the upper or lower lid near the inner canthus and seemingly prodding into the caruncle, you may sometimes find a short inverted white cilium, the removal of which, remedies the entire inflammation. If the pupil is immobile or sluggish, prevent adhesions of the iris to the anterior capsule of the lens and cause dilatation by instilling a mydriatic. Practise thorough antiseptics in all cases, and when examining the cornea, *always* use lid-retractors. If an ulcer is central dilate with *atropin*; but in marginal ring ulcers, which usually start at the sclero-corneal junction contract the pupil with *eserin*. Guard against insufficient or improper food, malhygiene, insanitary habitations, ophthalmia neonatorum, and above all, acute or chronic rhinitis for treatment of the eyes only and neglect of the nose symptoms will not only delay the cure of the patient and aggravate photophobia, but will also conduce to successive return crops of phlyctenular keratitis. Persistent treatment is indicated with *atropin* and yellow oxide of mercury, and nasal douches of boracic acid solution are invaluable when rhinitis accompanies. (2) The ear stands next in importance, and great advance has been made in its surgery as instanced by the removal of the ossicles (but not the stapes generally) and tympanic membrane for chronic suppuration of the middle ear when mastoid complications are absent; but when these are present, the establishment of free drainage by opening up the mastoid process or through the attic of the tympanic cavity and subsequent irrigation with *pyoktanin* will soon cure the patient. The majority of acute or chronic suppurating ears originate from some *pharyngeal or nasal inflammation*. Furuncle of the meatus, though very painful and stubborn in many instances, may often permanently be relieved by a solution of 40 grains of menthol to one ounce of olive oil. (3) The nose answering the place of filter to the lungs has important functions, and damage to it, creates awkward reflex affections of vital parts of the human economy. Therefore thorough cleanliness of the nose should always be insisted on. Stenosis when due to *endothorax*, or *hypertrophy* of the turbinated bones, demands operative interference.

First, petroleum is preferable to alcohol or benzoin as it adheres to the mucous membrane after spraying the most efficient antiseptics for rhinitis with ulcerative conditions and crust formations. Nasal polypi must be removed by the snare, not twisted off. In all cases of ocular or aural disease always examine the nose and treat its conditions. (4). The pharynx and larynx require considerable skill and dexterity for proper examination with the laryngoscope and post-nasal mirrors. In all "mouthbreathers" look for enlarged tonsils, follicular disease and ulcers, hemophilia and adenoid vegetations of the tonsils, or in the vault of the pharynx, and if operation be necessary, use the galvano-cautery preferably and apply chromic acid in conjunction with constitutional treatment; but do not employ the knife, as excision is often really dangerous. Counter-irritants are obnoxious. The pain and dysphagia of acute laryngitis are quickly eased by inhaling menthol through a curved glass inhaler, while the aphonia that sometimes accompanies yields nicely to sprays of alum or sulphocarbonate of zinc in 10-grain solutions. Inhalations of hot steam impregnated with camphor, eucalyptol, terebene, creasote, Tr. benzoin Co. and the direct application of menthol oil or lunar caustic are useful; but it is most important to promote free diaphoresis and expectoration, and to keep the secretions open. Do not trust too much to your patients to carry out your instructions, but attend to things yourself in laryngeal and pharyngeal diseases; and above all, be particularly careful to not forget to look for and treat aural, laryngeal, and nasal complications at the same time.

cost. This reuueoperty to the existence of a purely *Military* Medical Service employed on *Civil* work. The outcome of the system has, we reiterate, been disastrous to the development of medical research and the advancement of medical science, while it has divested independent medical practice and its practitioners of their rights and privileges, by placing a premium on the private services of *State-paid* medical officers.

Our colleges and hospitals are officered by military surgeons to the absolute exclusion of civil practitioners, though they are civil institutions. The field of private practice is monopolized by military surgeons to the positive detriment of their State-paid duties, while they compete with private practitioners on disastrous terms, taking every fee that comes in their way. They are supposed to be consultants, yet they accept family contracts on low fees, they ignore their specialities as professed consultants, and we find a surgical practitioner sitting for three and four hours at night over a midwifery case, while an official obstetric practitioner takes it upon himself to doctor a broken thigh. All this may fit in with LORD CHESTERFIELD'S advice to his son about "making money anyhow," but it positively lowers the prestige of these officers as professed consultants and beggars private physicians, on whose rightful preserves these official monopolists are poaching in every sense of the term.

Then there is the question of the countersignature of the medical certificates of private physicians by official surgeons. This is a cruel injustice, for it puts a false and unjustifiable premium on the State doctor's position, and helps him along in his practice to the detriment of his non-official brother. Besides we have had an instance reported in the *Record* and another recently in the *Reporter* which reveal a very wrong aspect of this ugly question. It places a "whip" in the hands of the official which he can lash about unmercifully at his own sweet whim and fancy to the utter discomfiture of his non-official rival. All this may sound harsh, but criticism of this kind is the only thing that goes through the official hide, which has become adamant in its recklessness to suasion of a milder and more genteel type. But thank the stars! The British medical public has got a clear view of this monopoly business, and the day of retribution and reform begins to dawn. Let all unite in the various medical associations of the country, and let these corporations unite with each other in the combined representation that soon goes before the British Parliament. Let "Patience and Perseverance" be our watch-word, and let persistent and courageous agitation be our policy.

THE DEATH-KNELL OF THE MEDICAL SERVICE ' MONOPOLY IN INDIA.

"THE BRITISH MEDICAL ASSOCIATION. *Reuter's Telegram, London, 1st August 1895.*—DR. ERNEST HART, at the meeting of the British Medical Association, held last night, declared that the whole of the Indian Medical Service needed overhauling and reconstituting. He censured the system whereby officers obtain by mere seniority, high positions for which they are quite incapable. The Association unanimously adopted a Resolution to make representations to the Secretary of State on the utter inadequacy of the sanitary administration of India to give the most elementary protection to Her Majesty's Indian subjects, and to urge the nomination of a Royal Commission or a Departmental Committee of Enquiry."

This glad news has been flashed across sea and land to India, and every son of the soil with every European and Anglo-Indian who has made India his home, will have abundant reason to rejoice. Our heartiest thanks are due to Dr. ERNEST HART, and on behalf of our brethren in India, we offer our cordial appreciation and gratitude to him and to our brethren of the BRITISH MEDICAL ASSOCIATION for their powerful aid in our cause. The cause of scientific medicine and sanitation, the advancement of liberal medical education and every thing that tends to develop and uplift the medical profession as it intimately concerns the people of India, have been utterly stunted, and hampered, and crushed by the weight of a most unjust and arbitrary monopoly, forced upon the country at an exorbitantly unwarrentable

CHOLERA AND LIFE INSURANCE.

DR. ORETEL, the German bacteriologist, who died in Hamburg in September 1894, from "laboratory cholera," had his life insured in favor of his mother. It will be remembered that the doctor contracted the disease in the course of his experiments, but it was never possible to exactly determine the manner of infection either before or after death. The policy read that "the amount was to be payable in case of "violent and sudden accident, independent of the will of the assured, and determined by an external mechanical cause." After the doctor's death the company refused to pay the policy, and the matter was referred to the Hamburg Court of Appeals, which has decided that "the multiplication of the bacilli and the efforts which these produce on the stomach and intestines are to be regarded as a chemical and not a mechanical action."—*Public Health*.

COMMENTS AND NEWS.

AN OLD ANGLO-INDIAN SURGEON.

We quote from the *Anglo-Indian Recorder*:—"Dr. JOHN LEYDEN (B. 1778—D. 1811), the son of a Roxburgh farmer, was born on the banks of the Teviot. He was intended for the Church, but finding that he was not likely to succeed in that calling, studied medicine instead. He took his degree of M.D., and was appointed an Assistant Surgeon in the Hon'ble E. I. Company's service. Arriving in Madras in 1808, he set himself to acquire a knowledge of the vernaculars. He was next posted as Medical Officer to a Commission appointed to survey the newly-acquired territory of Mysore, where his countryman, Sir John Malcolm, was Resident. Subsequently he was transferred to Calcutta, where he held consecutively, the appointments of Hindustani Professor at the College of Fort William, Judge of the 24-Pergunnas, Commissioner of the Court of Requests, and Assay-Master of His Majesty's Mint. In 1811 LEYDEN accompanied Lord Minto in the Expedition against Java, as Surgeon and Interpreter. He died at the early age of 36, of a chill fever brought on, it is supposed, while overhauling some old records in a damp godown in Batavia. Dr. LEYDEN was an eminent linguist, and was the author of several prose works. Among his poetical efforts the best known are *Scenes of Infancy*, and the various pieces contributed to Scott's *Minstrelsy of the Scottish Border*. Two versical tributes to his memory occur to mind; the first, by Sir JOHN MALCOLM, runs as follows:—

Where sleep the brave on Java's strand
Thy ardent spirit, Leyden, fled,
And fame, with cypress shades the land
Where genius fell, and valour bled.
When triumph's tale is westward borne
On Border hills no joy shall gleam,
And thy loved Teviot long shall mourn
The youthful Poet of her stream.

The other is taken from Sir Walter Scott's *Lord of the Isles* (Canto IV).

Scenes sung by him who sings no more;
His bright and brief career is o'er,
And mute his tuneful strains;
Quenched is his lamp of varied lore
That loved the light of song to pour,
A distant and a deadly shore.

Has LEYDEN's cold remains!"

ELEMENTS OF PROFESSIONAL SUCCESS.

SCARCELY a more fitting subject for an address to those entering upon their chosen career in life can be conceived than—"the elements of professional success"—adopted by Dr. W. P. MUNN in addressing the graduating class of the medical department of the University of Denver. Success with some individuals, he pointed out, means only the accumulation of wealth. These are lords of the fee and influences for evil in any community; and the young physician under their influence can never attain to true success. It is the earnest discipline of science, with high ideals, ready to sacrifice mere material interests to the welfare of humanity or the advancement of true scientific attainments, who are tempted to tread the rugged paths leading to true success. The profession, it must be remembered, renders service of value, and ought to receive a proper monetary acknowledgment in return; but money-making should not be the key-note of life. Professional efficiency too must be aimed at; and professional

success does not mean merely scientific study, but also the application of the knowledge so gained to the actual problems of health and disease, for science and practice always in parallel paths. Preventive medicine must be kept in sight as the science of to-day and of the future; and to improve and further this important science one needs, says Dr. MUNN, that talent most essential to real success in science—the talent of application for which the Germans are above all other races remarkable. It is to be remembered too that success comes slowly. One must, moreover, not lose heart at seeing his less competent brethren running up like rockets in professional success. These often come down like sticks. Solid growth is slow. Dr. MUNN's concluding words of advice are that ethical principles should govern one's life, that the confidences of patients should be held inviolate; and that one should ever remember that human life is sacred, and that it is not ours to sanction the destruction of a human entity even from the moment of conception.

THE GOVERNMENT AND THE CERTIFICATES OF PRIVATE PHYSICIANS IN COURTS OF LAW.

OUR readers will remember our contention that the action of the Deputy Police Magistrate of Sealdah in refusing to accept a private physician's medical certificate on the plea that such physician was not a *Presidency Surgeon*, was *ultra vires*, and we now have pleasure in publishing the reply of the Bengal Government to the representation made to it at the time the incident occurred:—

Dated 9th August 1895.

From E. V. LEVINGE, Esq.,

Under-Secretary to the Govt. of Bengal.

To JAMES R. WALLACE, Esq. M.D.,

L.R.C.P. & S. Edin. L.S.A., Lond.

Sir,—With reference to your letter dated the 25th June 1895, preferring a complaint against the action of the Deputy Magistrate, Sealdah, in rejecting a medical certificate given by you to Mr. Croft, who was defendant in a case that was being tried in his Court, I am directed to inform you that no rules have been made by Government regarding the validity of medical certificates in courts of law. The objection which appears to have been taken by the Government Prosecutor of the Sealdah Court that such certificates in a Calcutta Court must be given by a *Presidency Surgeon* does not rest upon the authority of any order passed by Government.

I have the honor to be &c. &c.

E. V. LEVINGE,

Under Secretary to the Government of Bengal.

We can only remind our independent brethren that owing to the absence of any definite law defining and protecting the rights and privileges of independent physicians and surgeons, magistrates and law officials have it in their power to do as they please; though their actions may be illegal, and it therefore behoves all concerned to agitate for the inauguration and establishment of a Medical Act for India.

ORTHOPÆDIC REFORMS.

Two things, says Dr. NOBLE SMITH, of the City Orthopædic Hospital and of All Saints Children's Hospital, are essential to the healthy growth and development of the young, viz. the adoption of natural methods to train the muscles, and the avoidance or removal of counter-acting influences. The neglect of one or both of these considerations, leads to deformities which it is important to recognise and treat at an early stage.

What principally determines the deformities in bones and ligaments is not the extent, but the continuance of an

muscular position. As a matter of fact a position however unsymmetrical and unnatural, does no harm, if it be not continuously maintained, whereas the continuance during rest or exercise, of slightly faulty positions, is harmful. The most potent factor giving rise to deformities in children is the clothing, which in 90 per cent of cases is said to be faulty. The garments should not be tight across the chest. The hips and not the shoulders should support the bottom garments, and hence preference should be given to belts (provided they are not too tight) over braces. Secondly, food insufficient in quantity, indifferent in quality, or badly cooked, leads to weakening of bones and ligaments, and favors deformities. Seeing then the important part that the continuance of a position plays in shaping or altering shapes, the treatment of deformities is best remedied by prolonged rest in a good position; that is, not recumbency *absolutely*, but the avoidance of exercises producing fatigue. Children should rest their backs in sitting down, and should not be made to "sit up." For spinal curvature a child should be fitted with a strong light apparatus, allowing of plenty of light, easy, and continually changing exercise and of free movement in almost every direction to the chest and arms, and enabling the spine to rest completely when necessary.

CHARITABLE DISPENSARIES IN BENGAL.

LAST year (1894) was particularly unhealthy as there was a large prevalence of malarial fever, and the cholera cases rose from 8,077 in the previous year to 12,181, thus showing an increase of 50.8 per cent. Two dispensaries were burnt down and one was closed; but the total number rose from 339 to 383, whose statistics are subjoined:—

| Detail. | 1894. | 1893. | Increase. |
|-----------------------------------|--------------|------------|-----------|
| Total of patients treated ... | 2,285,450 | 1,926,528 | 358,922 |
| Daily (average) attendance ... | 17,689 | 15,426 | 2,263 |
| Ratio per 1,000 of population ... | 32.3 | 27.2 | 5.1 |
| Cholera cases ... | 12,181 | 8,077 | 4,104 |
| Total income of Dispensaries ... | Rs. 7,20,025 | 6,14,737 | 1,05,288 |
| Government Contribution ... | " 76,918 | " 41,434 | 35,484 |
| Expenditure ... | " 6,96,102 | " 5,86,346 | 1,09,756 |
| European Medicines ... | " 1,08,070 | " 80,940 | 27,130 |
| Building charges ... | " 62,026 | " 40,216 | 21,810 |
| Opening Balance for next year ... | " 23,923 | " 28,371 | —4,448 |

While 15 of these dispensaries showed an increase of over 8,000 patients, 5 showed a decline exceeding 2,000, which decrease is accounted for by the general statement that the health of each locality has improved, but the Inspector-General observes that the popularity of a dispensary depends more on the civil surgeon and officers in charge than on the healthiness of the district, and the Lieutenant Governor fully endorses Dr. Ross's pertinent remark "Disease and suffering prevail everywhere, too often, unhappily, on a larger scale than the medical resources available can adequately deal with. But the main difficulty is to induce the people to submit themselves to treatment, and this depends chiefly on the tact and skill of the medical officers concerned and the confidence which the people repose in them: such confidence is a plant of slow growth."

MEDICAL REFORM IN INDIA.

THE *British Medical Journal*, quoting from the *Indian Medical Record*, says:—

"The following are briefly the points to be laid before the Secretary of State for India connected with the Indian Medical Service:

1. The need of putting a stop to military surgeons going into civil employ or duty.

2. To cause all military surgeons now in civil work to revert to military duty.

3. To throw the so-called "expert" or "speaking" posts and leading appointments open to competition in India and in England.

4. To instal the unaccredited as the nucleus for the Indian Civil Medical Service, and to fill up all Civil vacancies from the special additions that will be made to this Service.

5. To utilise military surgeons and assistant surgeons with British and Indian troops under a central organisation, which is tantamount to the amalgamation of the Army Medical and Indian Medical Service.

The *Journal* winds up by adding: "This programme must, in our opinion, sooner or later be adopted."

Our readers will see from our CORRESPONDENCE COLUMNS, that our brethren in Bombay are wide awake and active. We entreat all India to take up their excellent example. In Calcutta the representatives of the INDIAN MEDICAL ASSOCIATION and the MEDICAL ASSOCIATION OF INDIA can easily and becomingly join hands, and our representatives in other provinces ought to take the initiative at once by forming committees and collecting subscriptions. Bombay must not outbeat us in liberality.

ENDOWMENT OF SCIENCE IN JAPAN.

WE quote from the *British Medical Journal*:—"DR. KITASATO is not only the most brilliant scientific investigator in Japan, but one of the most original biologists of the present day of any nation. He worked for many years with KOCH at Berlin; and last year, when the plague was devastating Hong-Kong, he and Dr. AOKANA discovered the bacterial cause of the plague, and were thereby instrumental in arresting its ravages. He has been extremely successful in carrying out the antitoxin treatment of diphtheria, and out of 34 cases treated by him 31 have recovered. He is at present engaged in carrying out a series of experiments on leprosy with the most satisfactory results. If it is a fact that Dr. KITASATO is on the road to discovering not only the cause, but the cure of leprosy, he will confer an immense benefit on a long-suffering section of the human race. Japan has always been celebrated for generously acknowledging the services of her men of genius in art and literature, and it is gratifying to learn that Dr. KITASATO's discoveries are looked upon as contributing to the national glory, and that the Government has unanimously voted him a sum of money to be devoted to the laboratory superintended by him."

Surely this is an object lesson to the Government of India. DR. KITASATO is a native of Japan and not a member of the Indian Medical Service. India can turn out dozens of KITASATOS, but the Government of India has no desire to see them.

A LONDON STORY ABOUT INDIAN BIRTHS TO ORDER.

WE quote from the *British Medical Journal*:—"In India it is customary to entrust the duty of registering births and deaths in outlying country districts to natives, who are generally as ignorant of reading and writing as they are of English. Their memories, unperplexed by knowledge, are, however, retentive, and these registration officers may frequently be seen tramping, in companies of four or five together, into the city, to hand over verbally to the collector the data regarding the births and deaths in their several localities. Suspecting once that the records were carelessly kept in a certain village, a collector reported that the ratio of births was below the average, and suggested to the registrar that his returns could bear improvement. "Ah, it's more births the mahb wants," was the inner thought, and,

with Indian statistics, and expressed the desire to say the thing which pleased, the registrar's returns showed at once a remarkable increase in the number of births. All the babies were duly registered by name, and there was evidence that the village was prospering as population increased. Presently the vaccination officer began to ask why it was that he had no increase of vaccinations, and why these numerous babies were not brought to him? This natural question led to an inquiry, and to the discovery that the children registered so accurately had been born only in the earliest imagination of the registrar, and had been produced in his earnest desire to please the *barra sahib*. "What a story!"

REPORT OF THE BRITISH COMMISSION ON TUBERCULOSIS.

AFTER five long years of careful research and patient experiments, the Commission appointed by the British Parliament to enquire into the relation of food to tuberculosis has reported to the following effect:—(1). The use of meat from tuberculous animals is quite capable of producing the disease in previously healthy animals. (2). A great deal of the flesh of a tuberculous animal can be eaten with impunity, provided the whole of the tuberculous matter was carefully cut away. (3). Milk from the diseased udders of tuberculous cows contains bacilli, and will produce tuberculosis if injected into the blood of a healthy animal, but these conditions do not obtain with the milk drawn from tuberculous cows with healthy udders. (4). The direct inoculation of the flesh of a tuberculous cow does not produce any serious results in a healthy animal. (5). Boiling meat or milk immediately kills the tuberculous bacillus and destroys the toxins, but when meat is roasted, the infectious material on its surface only is killed, while the central or inside portions of the meat are not rendered innocuous. (6). The Commission was not quite agreed as to the value of tuberculin injections as a diagnostic agent in tuberculous cattle, but they admit that it is the most valuable of all the tests hitherto discovered for the detection of tuberculosis.

HOW STRYCHNINE AND COBRA POISON ACT ON THE COBRA.

DR. R. P. BANERJEE of Pachbadra sends us the following note:—

"In March 1908, I went through a series of control experiments with strychnine and cobra venom on different kinds of snakes, said to be poisonous, with the following results:—

- (1) Crotalides (Native of India varieties only) and Viperides were immune to cobra poison.
- (2) Najkies and Bangarides were not immune to viper poison; but immune to crotalidian poison.
- (3) Cobra (in all its varieties) was immune to strychnine.
- (4) Crotalideans were not immune to strychnine.
- (5) Viperides, though easily tetanised by strychnine, were yet safe.
- (6) Yarnides—doubtful.

V. Grieses and V. Hardwickii were immune to cobra and strychnine poison. They are considered by the natives of India more deadly than the cobra. Other species were not immune to any snake poison or strychnine."

CHLOROFORM FATALITIES IN INDIA.

SOME British medical journals have taken up our recent article on this subject and are demanding an inquiry into the facts. It is a fact that fatalities in India during the administration of chloroform are a very rare exception, and we attributed this immunity to the preponderance of Sydenham's principles and refused the comparative frequency of chloro-

form fatalities in England on the same grounds. We would make one small reservation from our previous article. We wrote: "There are almost no chloroform fatalities in India." Our printer omitted the word almost, which made a difference in our view of the case. With this exception, we are prepared to stand by our guns, and we are sure Indian hospital statistics and the practice of independent physicians in this country will bear us out in all we have written. Personally, with a special experience in chloroformisation, we can testify to carefully adhering to SYDENHAM'S principles for the past twenty years in as many as 15,000 cases, without a single casualty approaching dissolution.

INDIAN CURES FOR RABID DOG BITES: PASTEUR ANTIDATED.

DR. R. P. BANERJEE of Pachbadra, writes:—About LALIT KUMAR GUPTA'S article, in your paper of the 1st August 1905, p. 109, *et seq.*,—I have to state that it is the practice in Upper India as well as in cases of mad dog bite, the dog is killed, its ear is pricked and some blood is obtained, and the person bitten has to take this blood with a little powdered black pepper. Again I observed among the Pathans, Beloochees, Brahmis, and Marrees when in South Afghanistan—1882 to 1889—that in cases of dog-bites, instead of the blood of the killed animal, the lower portion of the medulla oblongata (called *kakka*) is taken out and rendered into a pulp, beaten up with rice water, (*conjee*) and the persons bitten are made to drink this morning and evening for three days. It is said to cause one to be immune from rabies. I personally never saw it done, but the general opinion was that this was the only cure at their disposal. This is also suggestive of more experiments in this direction.

LIFE AND DESTINY.

We shape ourselves the joy or fear
Of which the coming life is made.
And fill our future atmosphere
With sunshine or with shade,

The tissues of the life to be
We weave with colours all our own,
And in the field of destiny
We reap as we have sown.

Still shall the soul around it call
The shadows which it gathered here,
And painted on the eternal wall,
The past shall reappear.

Think ye the notes of holy song
On Milton's luteful ear have died?
Think ye that Raphael's angel throng
Has vanished from his side?

Oh no! we live our life again;
Or warmly touched, or coldly dim,
The pictures of the past remain—
Man's works shall follow him.

JOHN G. WHITTIER.

THE JAPANESE MEDICAL SERVICE.

THE Japanese Army is accompanied by 1,350 medical attendants of whom 880 are surgeons. The largest of the military hospitals is at Hiroshima. The staff consists of 30 surgeons and 401 nurses, as well as 178 surgeons and nurses from the Red Cross Society, in which many of the Japanese nobility serve. The society has 188 practitioners and nurses in the field. Dr. KITAZAKI, who has received his medical education in Germany, and was one of the best of Dr. Koch's students, deserves much of the credit for the present condition of surgery, medical practice, and sanitation in Japan.

SUBSCRIPTION FOR CORN

We quote the following poem, from the *New York Medical Journal*—

Prize your corn in the gray of the morn
With a blade that's shaved the dead,
And barefoot go and hide it so
The rain will rust it red:
Dip your foot in the dew and put
A print of it on the floor,
And stow the fat of a brindle cat,
And say this o'er and o'er:
Corney! morny! bladey! dead!
Gorey! sorey! rusty! red!
Footay! putay! floory! stow!
Fatsy! catay!

Mew!

Mew!

Come grease my corn
In the gray of the morn!
Mew! mew! mew!

—JAMES WHITCOMB RILEY.

INSANITARY CALCUTTA.

DR. SIMPSON says that he is not aware of any special causes of a new character tending to render the condition of Calcutta more insanitary than in previous years. The Health Officer remarks, "As regards the pollution of the soil, MR. BALDWIN LATHAM showed that the outfall of the Calcutta sewerage was obstructed by tidal influences, that the sewers were sewers of deposit, that they leaked into the subsoil, and that there was a constant interchange between the sewage, rainfall and subsoil water. That a number of the sewers leak, has been proved by uncovering them for inspection; that the soil is polluted, has been determined by analysis; that the subsoil water is contaminated, has been ascertained by the analysis of the water of wells; so that this condition of affairs produces a sort of *Goragatcha* throughout Calcutta. Since MR. BALDWIN LATHAM'S visit to Calcutta, I have, in every annual report, drawn special attention to the urgency of carrying out his recommendations, and the danger of delay which is now demonstrated from the fact that there were nearly 1,000 more deaths in 1894 from fever than in 1893, and that the increase during the six months of the year has been nearly 900 compared with the corresponding season of last year. The only means, in my opinion, to obviate in an efficient and satisfactory manner this state of affairs, is to take immediate steps to invite an expert of the experience of MR. BALDWIN LATHAM to visit, Calcutta, to draw up the designs for the necessary works, more specially with reference to the outfall of the city, to plan the suburban drainage and set the works in motion under a Superintending Drainage Engineer; and further to appoint this expert as Consulting Engineer, so that he may have complete charge and responsibility of the works, and inspect periodically their progress until they are finished. I believe it is only by reduction of overcrowding by a Building Act and by immediate and radical measures in regard to the purification of the soil, both in the town and suburbs, that it is possible to secure a proper remedy for the present state of things.

It is satisfactory to learn that there have been no cases of typhus fever recorded in Calcutta between 1891 and 1894. Of typhoid fever, there were seven deaths in 1891, four in 1892, eight in 1893, and six in 1894. DR. SIMPSON observes that these numbers refer to mortality and not to sickness; and that if there has been any increase of cases, the disease has not been of a fatal form.

ESSAYS ON LEPROSY.

THE essays on "Leprosy," which obtained the gold and medals offered by the English Leprosy Committee, have been published. These essays relate to the doctrine and antiquities of the disease in the British Islands, its prevalence and decline in Iceland, its increase at the Cape and prevalence in South Africa, its extent and probable causes in Australia, and the conditions under which it prevails in China, Cochinchina, Batavia and the Malay Peninsula.

CALCUTTA FRAUDS AND QUACKS.

Frauds and charlatans spring up in Calcutta like mushrooms. A spectacle seller in Chowringhee declares that he has a cure for cataract, and even advertises pills for purifying the blood, and ointments for sprains, sores and rheumatism. He declares he is an oculist and optician from the London Ophthalmic Hospital. We hereby notify the Police of Calcutta that this statement is a fraud.

WHO IS THIS MIDWIFE?

A so-called European midwife and sick-nurse advertises her need for work in the *Pioneer*. She states that she will not attend Eurasians. This woman has entirely mistaken her calling. Kindliness is an essential quality of a nurse's character, while this woman displays all absence of charity and is positively boorish.

SHORT ITEMS.

The Chemical Examiner to the Government of Bengal having asked all the civil medical officers to send him specimens of the poison of snakes infesting their respective districts, the Civil Surgeon of Howrah has sent ten full-grown black cobras in charge of a snake-charmer.

The *British Medical Association*, headed by Dr. Lawson Tait, protests against any Act of Parliament for registering midwives as "qualified to attend cases of labor." The desire is to make obstetric nurses in every case be under the guidance and control of a doctor.

It now appears that Dr. Allison was fined £20 not for using the titles which the General Medical Council ordered to be erased from the *Register*, but for styling himself L.R.C.P. instead of L.R.C.P. *Edinburgh*. Well, this is a caution!

Assistant Surgeon R. Sharples, I. M. S., is appointed to the sub-medical charge of the detachment of British troops at Lebong near Darjeeling. One hundred men of the Manchester Regiment from Diapora have reached Lebong.

Brigade-Surgeon Lieutenant-Colonel Franklin, Surgeon to the Viceroy, officiates, in addition to his own duties, as Inspector-General of Civil Hospitals in the Punjab, *cum* *habe*, who goes on three months' leave.

How does Franklin manage to doctor the Viceroy and still look after the Punjab? This is a conundrum!

We are glad to note that Surgeon Captain H. J. Dyson, Deputy Sanitary Commissioner, Punjab, has been appointed Sanitary Commissioner of Bengal. We hope the change will turn out to be a good one all round.

The Brussels Medical Graduates' Association held their annual dinner in London on the 29th July. Sir William Foster, M.D., Dr. Glover and Dr. Ernest Hart were among their guests.

Brigade-Surgeon Edward A. Black, M.D., F.R.C.P., who is now practising at Brighton, has sent out another edition of his excellent work on the diseases of children in India.

We are glad to learn that a fund has already been started for annuities in the native hospitals of Bombay, and that certain influential Parsee gentlemen have subscribed.

Brigade-Surgeon Lieutenant-Colonel J. Riddick, late Principal Medical Officer, Base Hospital, Cherat Relief Force, died at Mussoorie on the 27th July.

The index to Vol. VIII—from January to June 1895—of the *Indian Medical Record* goes out with this issue. It is an elaborate production, and hence the delay.

Surgeon-Lieutenant-Colonel J. A. Laing, M.D., Sanitary Commissioner, Madras, retires from the Service on September 9th.

Dr. Robertson, K.C.S.I., rejoins his appointment as British Agent at Chitral at once.

The Commissioners of Darjeeling have arranged to introduce the Pasteur system of filters into their water-works.

The Standard Life Office has scored recently by the generous liberality towards one of its insurers.

Members of the Indian Medical Association, who have not paid their subscriptions, will oblige the Treasurer (Surgeon-Major W. C. Hodgkins, S.A.M., Medical College, Calcutta) by sending them in without delay.

Subscribers in arrears with their payments to the "*Indian Medical Record*" will oblige the Proprietor by remitting their dues as early as possible.

VITAL STATISTICS.

| PROVINCES AND TOWNS. | Population according to last census. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population per annum. | NUMBER OF DEATHS FROM | | | | |
|---------------------------------------|--------------------------------------|---------------------------------|---------------------------------------|---------------|------------------------------------------|-----------------------|------------|--------|-------------------|-----|
| | | | | | | Cholera. | Small-pox. | Fever. | Bowel Complaints. | |
| ASSAM.— | | | | | | | | | | |
| Goalpara ... | 452,804 | { | Returns not received | | | | | | | |
| Kamrup ... | 634,249 | | | | | | | | | |
| Sibsagar ... | 457,274 | | | | | | | | | |
| Sylhet Dist. ... | 2,154,593 | | | | | | | | | |
| BENGAL.— | | | | | | | | | | |
| Calcutta { Urban ... | 681,560 | { | From 1st March to 20th June '95. | 5,250 | 38.6 | 564 | 1,105 | 1,836 | 346 | |
| Calcutta { Suburban ... | 116,606 | | | | | | | | | |
| Howrah ... | 165,192 | | | | | | | | | |
| Patna ... | 165,192 | | | | | | | | | |
| From 1st April to 30th April '95. | | | 2,850 | 2,976 | 42.90 | 677 | 104 | 1,226 | 319 | |
| From 1st April to 30th April '95. | | | 3,871 | 3,758 | 25.4 | 288 | 90 | 2,529 | 182 | |
| ROMBAY.— | | | | | | | | | | |
| Bombay ... | 821,764 | From 11th June to 2nd July '95. | | 1,458 | 1,858 | 29.2 | 2 | 21 | 512 | 165 |
| BURMA.— | | | | | | | | | | |
| Moulmein ... | 55,785 | { | From 12th May to 16th June. | 132 | 21.40 | ... | ... | 41 | 6 | |
| Rangoon ... | 180,324 | | | | | | | | | |
| From 10th May to 21st June. | | | ... | 698 | 28.54 | 6 | 2 | 129 | 71 | |
| CENTRAL PROVINCES.— | | | | | | | | | | |
| Jubbulpore ... | 73,155 | { | From 11th May to 8th June. | 428 | 214 | ... | 2 | 133 | 30 | |
| Nagpur ... | 117,014 | | | | | | | | | |
| Saugor ... | 32,736 | | | | | | | | | |
| From 11th May to 28th June '95. | | | 249 | 340 | ... | ... | 18 | 374 | 8 | |
| From 11th May to 28th June '95. | | | 78 | 168 | ... | ... | 12 | 802 | 7 | |
| MADRAS.— | | | | | | | | | | |
| Madras ... | 425,518 | { | From 11th May to 28th June '95. | 2,119 | 2,045 | 38.5 | 3 | 1 | 809 | 179 |
| Madras ... | 87,428 | | | | | | | | | |
| Trichinopoly ... | 90,609 | | | | | | | | | |
| From 11th May to 28th June '95. | | | ... | ... | ... | ... | ... | ... | ... | |
| From 11th May to 28th June '95. | | | Returns not received. | | | | | | | |
| N.-W. PROVINCES.— | | | | | | | | | | |
| Allahabad ... | 162,895 | { | From 1st March to 31st March 1895. | 3,016 | 2,338 | 1.52 | ... | ... | 1,938 | 39 |
| Banars ... | 218,168 | | | | | | | | | |
| Cawnpur ... | 168,779 | | | | | | | | | |
| Lucknow ... | 244,308 | | | | | | | | | |
| From 1st March to 31st March 1895. | | | 1,867 | 1,965 | 2.18 | 38 | 2 | 1,454 | 139 | |
| From 1st March to 31st March 1895. | | | 3,080 | 1,900 | 1.57 | 1 | ... | 1,508 | 23 | |
| From 1st March to 31st March 1895. | | | 1,930 | 1,306 | 1.67 | 2 | ... | 983 | 30 | |
| PUNJAB.— | | | | | | | | | | |
| Amritsar ... | 185,401 | { | From 1st March to the 15th June 1895. | 8,768 | 4,629 | 38.5 | ... | ... | 2,594 | 36 |
| Delhi ... | 189,648 | | | | | | | | | |
| Lahore ... | 189,597 | | | | | | | | | |
| Mooltan ... | 64,365 | | | | | | | | | |
| Peshawar ... | 63,079 | | | | | | | | | |
| From 1st March to the 15th June 1895. | | | 4,825 | 4,037 | 44.26 | 1 | 31 | 2,208 | 129 | |
| From 1st March to the 15th June 1895. | | | 7,874 | 4,588 | 30.16 | ... | 3 | 2,709 | 76 | |
| From 1st March to the 15th June 1895. | | | 4,165 | 2,106 | 24.25 | ... | 27 | 3,521 | 84 | |
| From 1st March to the 15th June 1895. | | | 3,057 | 3,163 | 36.14 | ... | 23 | 1,730 | 35 | |

* Returns not complete.

OUR LONDON LETTER.

(From our own Correspondent.)

Some strange facts have come out at recent inquests held in the metropolis. The first is a case of poisoning from habitual chloroform inhalations. **Mr. F. C. BANKS** (*Hæmorrhoids*) *ætat.* 64, had been supplied daily with 2 oz. of chloroform during 18 months. This he inhaled by means of a paper cone sprinkled with m. xxx or more to dull the pain of a poisoned wound of his finger. One morning he was found dead by his wife with one of these cones over his nose. The second, **S. J. RIDGWAY**, *ætat.* 47, habitually applied a cocaine solution to her gums to relieve neuralgic pain. On this particular occasion she was found to be suffering from pain. **DR. CURGENVEN** was summoned and arrived on the scene, but she sank rapidly and died within an hour from cocaine poisoning. It seems that cocaine does appear in the schedule under the sale of Poisons Act, and it has not been ascertained yet what is a toxic dose of this alkaloid.

The fall of Lord Roseberry's cabinet is now *un fait accompli*.

Lord Salisbury has kissed the Queen's hands and accepted his appointment as Prime Minister.

One of our leading biological *savants*, Professor **HUXLEY**, has passed away. He was born at Ealing, 4th May 1825. He entered our profession and was for some years on foreign stations as a naval surgeon and became a professor of Natural History in 1854. He supported powerfully the theories expressed by Darwin's works. He was a lucid and able writer, and is best known to medical men through his small book on "Physiology." His zoological and palæontological works take a high place in scientific literature. Many societies, both at home and abroad, accorded him their highest honors.

The Shahzada seems to have greatly enjoyed his visit to the Houses of Parliament.

The great Indian Exhibition at Earl's Court is now one of "the sights of London;" the novel scene delights the spectators one and all, and is reported an unqualified success.

DR. CORNELIUS HEBZ, the French political refugee, is still resident at Bournemouth, but the English police have withdrawn their supervising official.

The Medical Department of H. M. Queen Victoria costs £2,700 per annum, and comprises 24 individuals! We refer, of course, to her own household.

Many ladies of note, including Lady **RANDOLPH ORTCHILL**, have become ardent "cyclists."

Her Majesty forwarded £3 to a **MRS. GALE**, who has just borne alive two boys and a girl.

The **Duke of CONNAUGHT** presided over the festival dinner in aid of the Westminster Hospital.

The Turkish Government has promulgated an order rendering the notification of certain diseases (cholera, small-pox, dysentery, &c.) compulsory on the practitioners of Constantinople.

At the annual meeting of the Royal Society, 3 distinguished medical men received the much-coveted distinction of F. R. S., their names being **DR. SIDNEY MARTIN**, Professor Maclewan of Glasgow; and **MR. POWER** of the Local Government Board.

We mention with heartfelt regret the death of **MR. ARTHUR DUBAN**, F.R.S., the well-known consulting surgeon of Guy's Hospital; the cause of death was

pneumonia, and the duration of his illness was short. He was a member of the Council of the R. C. S. England, and had been Vice-President. Among his literary efforts are: "The Physiology of Sleep," "Sleeping and Dreaming" together with valuable monographs on surgical and medical subjects.

More deaths are recorded under the heading "Anæsthetics, A. C. E. mixture and Chloroform."

Another eminent medico has left our ranks in the person of **SIR GEORGE BUCHANAN**, M.D., F.R.S. He had lately undergone a seemingly successful operation, and was convalescing. Cardiac pain however suddenly superposed, and he died in a few minutes. He was born in Clarks-well, 1831; educated at University College, where he graduated in 1856. In 1861 he served under the Privy Council and systematized the Vaccination Acts in 1867. In 1869 he became Medical Inspector under the Privy Council, and then went over as assistant M. O. of the Local Government Board. He was appointed Chief to that Board in 1879, retiring in 1892 when he was knighted. He was F. U. L., LL. D. (Edinburgh) F. R. C. P. London.

The registration of milkmen is being talked of in order to check the spread of tuberculosis.

DR. CARL VOGT, the Swiss Naturalist and Physiologist has joined the great majority.

A case of poisoning by "Lysol" comes to us from Austria. Professor **HOFFMANN** stated that the toxic action was due to contained "Creosols" as is the case with commercial and coal tar creosote.

A great loss to physiological science is the decease of **DR. CARL LUDWIG**. For thirty years he taught in the Physiological Institution, Vienna; hither flocked *savants* from all countries to learn his new methods of research and enjoy his genial converse. His work was his greatest delight. Some of the most distinguished physiologists in the world were his pupils, among them were **LAUDER BRUNTON**, **RAY LANKESTER**, **COATES**, &c. At the time of his death he was 78 years of age, and a strong supporter of the Darwinian theory.

DR. H. CHARLTON BASTIAN, F.R.S., has resigned the chair of Medicine at the London University. The vacancy will be worthily filled by **DR. FREDERICK ROBERTS**.

MR. FRANK HAYDON, L.R.C.P., has succeeded **DR. C. E. ARMAND SEMPLE** (deceased) as Secretary to the Court of Examiners, Apothecaries' Hall, London.

Professor **HORSLEY** has successfully trephined a patient for focal epilepsy, and also a woman for traumatic epilepsy. The wound healed by the first intention, and the patient is doing well.

A new method of purifying water has come to the fore from France. Drinking water is treated 1st with permanganate of lime and then filtered by binoxide of manganese. The lime salt in the presence of micro-organisms and organic matter is decomposed into oxygen, oxide of manganese and lime, and to get rid of any excess of lime permanganate, the water is passed over a bed of manganese dioxide. Water thus treated is quite clear and free from organic impurities and bacteria. It certainly is simplicity unadorned as a process.

DR. BINDS states in a therapeutic contemporary that bismuth salicylate is our best substitute for iodoform.

MR. BARNETT operated on a woman *æd.* 22 for that very rare condition known as "Floating Ovary."

Current Medical Literature.

MEDICINE.

Complications of Malaria.

J. M. ANDERS, of Philadelphia, read a paper entitled "A Statistical Study of the Complications of Malaria." He analysed 1,780 cases with reference to their complications, which were noted in 189 instances, or 10.7 per cent. The cases were classified into: intermittent fever, 1,434; remittent, 74; malarial cachexia, 27; chronic malaria and irregular types, 22; unclassified, 222. All instances in which an element of doubt existed were eliminated. The complications of malaria, while as frequent as those of some of the other acute infective diseases, were somewhat peculiar in character, and on the whole not grave in nature, as was illustrated by a list of the complications of most frequent occurrence, prominent among which were heart disease, enteritis, neuralgia, albuminuria, pleurisy, rheumatism, pulmonary tuberculosis, typhoid fever, etc. The author agreed with the opinion that malaria promotes the development of pulmonary tuberculosis. Pleurisy was more frequently due to secondary infection, and was to be regarded as a genuine complication. Rheumatism was a not uncommon concomitant of malarial toxæmia. Among the 1,780 cases of malaria analysed, there were only 5 of lobar pneumonia and 1 of catarrhal pneumonia. There was a class of cases in which both malaria and typhoid fever were met with in the same individual simultaneously. The relationship, however, could not be close, nor was the compound affection due to a third extraneous "compound agent," but to the effects of two pathogenic organisms in one body at the same time. A careful blood examination in cases of suspected typho-malarial fever would shew many to be instances of pure typhoid fever, chills and sweats and intermittent temperature curve being sometimes observed in typhoid. When the temperature curve was of the intermittent type from the commencement, the course of the affection was usually favorable. (*Med. News.*)

Pernicious Anæmia caused by Intestinal Worms.

M. SCHIFFEROVITCH first epitomises as follow the different opinions put forth by various authors in regard to the pathogenesis of this form of anæmia:—

1. Intestinal worms, especially diseased worms, elaborate chemical substances of unknown composition, which poison the organism.
2. Pernicious anæmia may be due to an irritation of the intestinal mucous membrane acting by reflex influence upon the nervous system.
3. The worms absorb the nutritive fluids contained in the intestinal tube, produce reflex depression of the nervous system, and thus render the organism less resistant to attacks of deleterious agents.

The author does not accept the first two statements, but inclines to favor the third theory. He cites in its support two cases which came under his observation. In the first, the patient remained ill, notwithstanding the expulsion of a *botrioccephalus latus*, and the autopsy revealed pathological conditions which explained the origin of the anæmia. In the second case, notable relief was obtained, although no vermifuge had been taken and the worms had not been expelled. In conclusion the author draws attention to the fact that extract of male-fern is not an inoffensive substance, and advises that the dose of 2 to 4 grammes ($\frac{1}{2}$ to 1

drachm) should never be exceeded, and ~~advises the~~ practice of administering it in doses of 10 grammes, as is the custom with certain clinicians.—*Med. Bulletin.*

Recent Cholera Studies.

METSCHNIKOFF declares that:—

1. The well established fact of local immunity against cholera cannot be explained by peculiar conditions restricting the vitality of the specific vibrio.
2. It can not be admitted that local immunity is of the nature of an unrecognised and permanent "vaccination" of the inhabitants.
3. The blood of the inhabitants of immune localities is not distinguishable by any special quality preventive of the cholera infection.
4. The ingestion of cholera cultures does not surely protect against the cholera-producing effect of KOCH's vibrio.
5. The cholera vibrio, developed on nutrient media together with other microbes, is greatly influenced and changed by these.
6. The immunity of animals against intestinal cholera is in great part due to the restrictive influence that the "flora" of the digestive canal exert on the vibrio of cholera.
7. In the immunity and receptivity of human beings and animals against intestinal cholera, the other kinds of microbes in the digestive canal play an important part. This allows one to admit that the vibrio of KOCH (*comma bacillus*) is the specific agent of cholera, and to reconcile this view with the facts of epidemiology—that is, among others, with the influence of time and place on the march of cholera epidemics.—*N. Y. Med. Journ.*

A Sarcoma of Abdominal Cavity cured by Toxins of Erysipelas.

HERMAN MYNTER, M.D., reports a case of an abdominal tumour in a girl of twelve, said to have originated from a fall. Duration of tumour was four months. The enlargement of the abdomen continued, and caused great respiratory distress and œdema of the legs; tapping was tried, but with negative result. It was then decided to make an exploratory incision, when, in addition to two quarts of brown odourless fluid, an inoperable growth was found involving the parietal peritoneum, mesentery, pelvic organs and cæcum. The abdomen was closed and a large tube put in; but before closing it a portion of the growth was removed and proved by microscopical examination to be a sarcoma, consisting chiefly of round and elongated cells with abundant blood-vessels. Four days after operation injections of filtered toxins of erysipelas were commenced, and from that time the tumour began to decrease in size, large pieces of necrotic tissue being continually discharged through the drainage tube. The tumour in this way gradually disappeared, and patient recovered perfect health.—*N. Y. Med. Rec.*

Is Cancer Hereditary?

D. W. ROGER WILLIAMS, writing to the *British Medical Journal*, says:—Perhaps the most direct way of answering such a suggestion as DR. WALTERS's, that "A mother and daughter both suffering from cancer may easily have acquired it from a common source without any special predisposition" is by an appeal to the fact demonstrated by me, that the disease is so often homotopic in its transmission, that is to say, it attacks the corresponding organ in each of the related individuals with preponderating frequency. The following cases illustrate this in a particularly striking manner:

1. A woman, aged 55, came under my observation with uterine cancer, whose maternal grandmother, mother (aged

48), mother's sister, and the patient's two sisters (aged 82 and 84) had all died of cancer of the uterus.

2. In a case recorded by SIBLEY, a mother and her five daughters all died of cancer of the left breast.

3. Of the celebrated BONAPARTE family, NAPOLEON I, his father, his brother LUIGIEN, and two of his sisters all died of cancer of the stomach.

Cases of this kind seem to me to prove conclusively the hereditability of cancer.

Smoker's Vertigo.

M. KOHOS says that vertigo caused by nicotine was very frequently observed, and that it manifested itself sometimes under the form of a slight acute poisoning accompanied with pallor, salivation, cold sweats, headache, vertigo, staggering, etc., which symptoms were produced in those who smoked for the first time; sometimes the poisoning was more serious, as, for instance, in the case of a man who had smoked twenty-five pipes on a wager, who suffered for many months with vertigo. The vertigo of the chronic intoxication from tobacco, he said, might be observed in the workmen and workwomen in tobacco factories, as well as in smokers, in snufftakers, and in those who chewed tobacco. The action of nicotine varied according to the amount absorbed, and the disturbances caused in the life of the cells in consequence of their contact with the poison might also be variable.

M. LE ROY DE MERICOURT remarked that he had never observed smoker's vertigo in Brittany or in certain other countries in which he had lived for a long time, but he had observed a tendency to syncope dependent upon disturbance of the circulation following intoxication with the ordinary tobacco.

Diagnosis of Tuberculosis in Children.

DR. E. WEILL, of Lyons, has observed a special syndrome in three cases of infantile pulmonary tuberculosis which he believes to have been as yet unnoted. It consists in a sensation of cold with perceptible lowering of the peripheral and central temperature, marked cyanosis of the extremities with noticeable modification of the radial pulse, considerable alteration in the number of red cells in the cyanosed portions, and in the composition of the urine. These conditions are readily produced by having the patient leave his bed, and they slowly disappear when he lies down. They are transitory symptoms, of an intermittent character, independent of the clinical form of the tuberculosis, of the stage of the disease, of the season, or of the diet.—*Univ. Med. Journ.*

SURGERY.

The Catheter versus the Hand.

DR. H. STARK has suggested that manual expression of the bladder through the abdominal walls is a procedure that should often supersede catheterism and puncture. Granted a distended bladder and one accessible from the abdomen, Dr. STARK believes the method to be harmless, provided its indication be correctly established. The way in which it is to be carried out is thus described:—"The patient is to lie in bed on his back, with the thighs flexed, so as to attain the maximum relaxation of the abdominal musculature. For the purpose of guarding against eventual formation of folds, the bladder is first lifted up; a concentric and uniform pressure, with the hands flatly placed upon the tumor (the finger-tips being directed toward the symphysis), is exerted in the direction toward the internal urethral orifice. The pressure should not occasion pain, and should not be regarded

as accomplished before the distension of the bladder has completely disappeared." This description seems easy, but we cannot help doubting it to be so. If the method is not to be used when it causes pain, then its applicability must be very limited. Even the moderate distension due to want of opportunity, a condition occasionally experienced by us all, is not unattended with pain, even when manual expression is absent. The contra-indications given by its advocate are these:—1. Where there is occlusion of the urethra. 2. Where there are grave pathological alterations in the vesical wall, when these may threaten laceration. No doubt the passage of a catheter is attended with certain very real dangers, but these can be reduced to a minimum by a careful surgeon.

The Benefit to Ear Patients from Nasal Treatment.

FROM summary observations on this subject, Dr. GRADLE, of Chicago, draws the following conclusions: 1. Acute suppurative inflammation of the middle ear if not treated (locally) has a tendency to become chronic, the tendency increasing with the age of the patient. 2. Chronic suppuration of the middle ear rarely heals without treatment. Neither acute nor chronic purulent otitis is influenced by nasal treatment, but the liability to relapse after their cure is decidedly lessened by the removal of naso-pharyngeal anomalies. 3. Acute catarrh of the middle ear will generally terminate in complete recovery under aural treatment, and sometimes even without it, provided there are no persistent nasal or pharyngeal lesions. But when these are present, the disease is more likely to become chronic in spite of aural treatment, and in many instances can either not be cured, or if improved, will speedily relapse unless the normal state of the nose and throat is restored. 4. Proliferation or adhesive disease of the middle ear is the consequence of retro-nasal catarrh, and its course is determined by the course of the disorder causing it. Aural treatment alone is practically useless in this form of trouble, while nasal treatment, if successful as far as the catarrh is concerned, will also arrest the ear-disease. The restitution of hearing, however, depends on the length of time the disease has lasted, and is often aided by ear-treatment after the cure of the retro-nasal catarrh.—*Journ. of the Amer. Med. Assoc.*

The Conservative Treatment of Muscular Insufficiencies.

HEATH gives the following reasons for a moderately conservative treatment of these cases: 1. The eye muscles are variable in their strength from day to day. 2. Our diagnosis may be wrong. A coincidence may be mistaken for cause and effect, symptoms due to some other cause being attributed to the insufficiency discovered. 3. The difficulty in deciding which is the cause and which the effect in some cases of nervous prostration with insufficiency of one or more eye-muscles. 4. Some patients are neurotic by birth and can never be cured. Palliation is all they can ever expect, and radical treatment becomes hardly justifiable. 5. We should first thoroughly understand the effect of refractive errors and their correction. As errors of refraction frequently cause muscular insufficiencies, correction of the former will often relieve symptoms due to the latter. 6. Regulating the effect of an operation is difficult, if not impossible. It may be too much, too little, or none at all. 7. Results reported by operators are often due to other things than the operation. 8. Some cases shew weakness of all the muscles. 9. Simple measures relieve many cases.—*Annals of Ophthalm. and Otol.*

Surgical Treatment of Empyema.

POINTS IN SURGICAL TREATMENT. Absolute certainty of diagnosis by an exploratory puncture with an aseptic needle; use of a single aspiration in children, followed, in the event of a re-accumulation, by open incision and drainage; no justification for aspiration in adults, except as a mere preliminary to pleurotomy in all recent cases, excluding only the employment of aspiration as an initial procedure in children; avoidance of general anesthesia when practicable; a single opening for drainage, not located in the most dependent portion of the chest; double drainage-tubes to extend but slightly within the cavity; the resection of a small portion of a single rib in case of a fetid discharge or of marked approximation of the ribs; no irrigation of the cavity, unless in the presence of considerable fever, the irrigating solutions to be introduced slowly, of proper temperature, and non-poisonous in nature; observance of scrupulous asepsis during each dressing from the beginning to the end of the case; adoption of multiple rib-resection in the event of an unduly prolonged continuance of the pus-cavity; number of ribs resected and size of section to correspond with the depth and extent of the cavity; exceedingly rare justification for the employment of complete thoracoplasty. (S. G. BOWNEY, *Univ. Med. Jour.*)

Trephining in Epilepsy.

HALLAGER mentions the case of a young woman of neurotic and phthisical family history, *et. 22*. Aphasia developed suddenly in January 1893, the next day convulsions began, and the right upper limb became paretic, then the lower. In the course of a few weeks the aphasia and paresis disappeared, *alicia* supervening. The fit usually began by a trembling sensation in the right arm, which was raised with the wrist bent, the right facial muscles twitched, consciousness was lost, and convulsions set in. Bromide treatment was tried for a year and reduced the frequency of the fits, but had to be abandoned owing to toxic symptoms being set up. In February 1894 memory became impaired and the intellect dulled; there was severe pain on both sides of the head; the right arm also weakened progressively. In April 1894 a trephine hole was made over the centre for the upper limb, and a cyst, the size of a hazelnut found containing a darkish brown fluid. For sometime after the operation the paresis continued, and in May two fits came on; four grains of Bromide were then given with the result that the fits ceased and did not recur up to the time of being last seen in August, 1894.

The Treatment of Goitre.

PROFESSOR KOCHER has had some remarkable results in the treatment of goitre, if we may judge by his report at the Congress of German surgeons, held at Berlin. In the last nine hundred cases operated upon by him, he has abandoned wholly the method of total extirpation and has performed a partial operation only. Since first he acted thus, he has only had one case of cachexia strumipriva, and that in a patient the remaining part of whose thyroid gland was found to be atrophied. This case was cured by the internal administration of thyroid gland. Professor KOCHER's mortality being only twelve per cent, he is well satisfied with his results; but he expressed a hope that the number of operations would soon be reduced and their place taken by internal medication. The most remarkable communication that the professor made, however, was a description of the influence of the internal administration of thyroid extract and phosphate of potassium; and he showed a number of photographs of patients thus treated, in whom the reduction of the gland was very obvious. (*Med. Times and Hosp. Gazette.*)

Sterilization of Catgut.

DR. LATIMER, of Hartford, says that he has found in catgut sold as sterilized, several kinds of bacteria, such as *bacillus subtilis*, *staphylococcus albus*, and *micrococcus tetragenus*. Suppuration, he was sure, often arose from catgut sutures. In thirty-five out of one hundred and forty-nine specimens of catgut he was able to cultivate the bacteria on gelatin. The greatest number of germs were observed in catgut sterilized by a dry process.

—10—

OBSTETRICS AND GYNECOLOGY.**Tubal Abortion.**

MURET discusses this subject. The termination of tubal pregnancy during the early months is little recognized, but is nevertheless frequent, and perhaps more frequent than rupture of the gravid tube. Complete tubal abortion takes place all at once. The ovum is expelled into the abdominal cavity with corresponding symptoms more or less marked. Uterine decidua are expelled, and an intraperitoneal hematocoele is formed. Then resolution occurs, and there is no repetition of the onset. Tubal abortion should be considered a favorable termination of tubal pregnancy, not requiring operation and capable of diagnosis. If the abortion be incomplete, part of the ovum is retained in the tube, and a tubal mole is formed. As in incomplete uterine abortion, so with incomplete tubal abortion, hemorrhage occurs repeatedly till the oviduct is evacuated. The blood effused in the tube empties itself into the abdominal cavity through the patent ostium abdominale, and forms a hematocoele which gradually increases. The symptoms of incomplete tubal abortion are tubal colic, the expulsion from the womb of decidua without chorionic villi, and repeated attacks of intermittent pain with symptoms of internal hemorrhage. Locally, there is perceived first a swelling of the tube, and then the development of a gradually enlarging tumour. At first the symptoms of anemia are much less serious and less acute than in the case of rupture of a gravid tube. Sometimes a very considerable thinning of the tubal wall takes place at the summit of the insertion of the tubal mole, and MURET thinks that this may be due to the fact that at first hemorrhage is localised between the ovum and the wall of the tube, and that in this way rupture of the tube might be caused, even though the ostium abdominale were patent. In incomplete tubal abortion abdominal section is always indicated.—B. M. J.

The Permanent Results of Symphysiotomy.

SUFFICIENT time has now elapsed since the wide adoption of symphysiotomy by antiseptic methods to furnish data which will assist in estimating the permanent results of the operation. As most of the patients requiring the operation are dependent on their work for a livelihood, it becomes a serious matter to ascertain the condition of health as regards ability to work, which can be promised to these patients in selecting this operation. The reports from SCHAUTA'S and GUSTAV BRAUN'S clinics by VON WOERNER and RICHARD BRAUN afford data of value upon this question. VON WOERNER reports ten symphysiotomies performed some time previously, most of the patients being still available for observation. Of the 10 patients, 1 died of sepsis after the operation; 6 are in good condition, abundantly able to work without inconvenience; 1 could not be followed after leaving hospital care; 1 cannot stoop to work on her hands and knees without pain in the sacro-femoral joints; 1 suffered from incontinence of urine, which was cured by taking cold baths. BRAUN reports 6 symphysiotomies, and of these none died, 6 are now in good condition, working without inconvenience; 1 suffers from incontinence of urine and sacro-femoral pain on heavy lifting; 1 has incontinence of

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and spinning on lifting. In Von Wurm's cases 3 were treated by drilling the symphysis and wiring with silver wire; 12½ the wire suture could not be successfully applied, and 1 had no suture. While good union is possible without suture, yet suture is preferable. BHAUN treated 3 cases with drilling and wiring; with suture of the pericæum, 4; and without suture, 1. There seemed to be no difference in the result in these cases. From these cases the conclusion may be fairly drawn that symphysiotomy under good surgical care is an operation undoubtedly saving fetal life as no serious risk of death or permanent disability to the mother. In view of the excellent results obtained without drilling and wiring the symphysis, this procedure is unnecessary.—*Amer. Journ. of the Med. Sciences.*

Serum treatment of Puerperal Fever and Erysipelas.

M. ROGER related some cases of puerperal fever and erysipelas treated by the injection of an antistreptococcal serum. The first case, a severe one, was cured in forty-eight hours. The next case, treated by himself and CHARBIN, was that of a woman who was delivered on February 16th. The next day fever appeared, and on the evening of February 22nd the temperature was 102.2°F. (39°C.). On the morning of February 23rd the temperature was 101°F. (38.3°C.), lochia fetid; 26 cubic centimetres (6½ fluidrachms) of the serum was injected. In the evening, the temperature having risen nearly one degree, another injection of 20 cubic centimetres (5 fluidrachms) was made. Next morning the patient felt better, and on February 25th, after two more injections of 20 cubic centimetres (5 fluidrachms), the temperature fell. The lochia became normal, and the general condition was excellent. In another instance, a weakly infant, aged 3 weeks, and weighing only about 5½ pounds (2.5 kilogrammes) at its birth, was attacked by erysipelas. Forty-eight hours after the appearance of the rash on the upper lip and cheeks 5 cubic centimetres (1½ fluidrachms) of the serum were injected under the skin. The infant was cured in four days. Its weight rapidly increased, and on March 17th was 6½ pounds 3 (kilogrammes). This case is the more interesting since erysipelas neonatorum is almost always fatal. The last case was one of severe suppurative tonsillitis, with pseudomembrane containing coecol, occurring in a woman twenty hours after confinement. The temperature varied between 108° and 106°F. (40.5° and 41.1°C.); pulse 148 feeble and irregular. The patient received 60 cubic centimetres (1½ fluidounces) of the serum the first day, in two injections; 80 cubic centimetres (1 fluidounce) the next day. Thirty-six hours after the first injection the temperature had dropped to 101°F. (38.3°C.), and twenty-four hours later it became and remained normal. Although these cases are too few in number to justify any general conclusions regarding the curative action of the serum, yet they are believed sufficient to demonstrate its harmlessness and to encourage early resort to the treatment.—*B. M. J.*

The Influence of Tropical Climates on Menstruation.

Dr. JOUBERT, Professor of Midwifery at the Eden Hospital, Calcutta, says:—"It is well known that menstruation appears at an earlier age among the natives of tropical climates than in England, and the impression has been that this was due to the influence of the climate. Dr. JOUBERT has collected statistics on the subject, and he finds that there is very little difference as regards the age at which menstruation appears between Europeans and Europeans born in India, who have lived all their lives in that country. Among the natives, however, menstruation does appear at an earlier age than among Europeans; for instance, of the

cases referred to in Dr. JOUBERT's paper, menarche appeared in girls between twelve and thirteen years of age in 26.4 per cent. of the natives, while it only appeared at this age in 13.4 per cent. of Europeans, and in only 10.4 per cent. of Europeans born and reared in India. According to Dr. JOUBERT the cause of this difference is not to be ascribed to the climate, but to the different social customs prevailing among the natives, and especially to the absence of all privacy in the domestic life of an Indian household, which allows children to become acquainted with sexual matters. Thus, he says, when attending a pregnant or lying-in woman, he has often had to ask that the children of both sexes who were present should be sent away. Indeed, from his knowledge of the country, Dr. JOUBERT says he doubts whether there are any little girls or boys who have reached the age of ten years without having a pretty accurate knowledge of what the sexual relations and child-bearing really mean. We think that Dr. JOUBERT has made out a very probable case for thinking that climate has comparatively little to do with the early appearance of menstruation among the natives in India. It would be interesting to know, however, whether among races living in colder climates, but under similar social conditions as regards want of privacy, &c., a similar precocity as regards the age at which menstruation appears, has been observed.—*Lancet.*

The future Treatment of Septic Pelvic Diseases.

HEUROTIN thinks that in ten years these affections will be treated in a more definite manner than at present. Having failed to stop the disease within the uterus, physicians will not wait idly by whilst peritonitis and cellulitis play havoc and produce incurable destructive conditions. Incipient phlegm in the broad ligaments will be incised and drained early, intratubal disease will be recognised in time for conservative treatment, which will follow the perfection of radical work. In neglected cases, when the appendages are the seat of chronic disease, they will not always be sacrificed; in a young subject drainage of an ovarian or tubal abscess may be followed by cure and restored function. The incision in such a case will be made through the abdominal parietes. But when it is evident that both appendages are hopelessly diseased, hysterectomy through the vagina, with complete removal of the appendages, will be practised. Too many radical operations are now performed; ten years hence conservative treatment will save numerous ovaries. When the appendages are physiologically destroyed the uterus will always be removed with them, and, in default of special contra-indicating reasons, by the way of the vagina.—*Amer. Gyn. and Obst. Journ.*

Therapeutic Action of Chloroform in Parturition.

At the recent meeting of the American Medical Association BEDFORD BROWN read a paper on the use of chloroform in labor. He said that in all literature there are reported not more than 40 cases of death from chloroform in labor. He had used the anæsthetic, given every half hour for from twenty to forty hours, without any trouble following. He had seen profound chloroform narcosis in obstetrics lasting for three or four hours without grave effects. He objected, however, to the careless use of the anæsthetic. The alteration in the vasomotor system of a pregnant woman enabled her to resist the toxic action of chloroform to this wonderful extent. Was the use of chloroform in labor for the relief of pain alone justifiable? He believed it was not only justifiable, but that it would be inhuman to withhold it. At what stage of parturition was chloroform applicable? For pain in

any stage in small quantities. To remove muscular rigidity of the cervix or perineum a larger quantity was required, until there followed complete muscular relaxation. Did chloroform tend to prevent uterine contractions? If given in sufficient quantity it would do this. Did its use tend to promote hemorrhage? He had never seen a greater tendency to hemorrhage after than without its use. In 2,800 cases of labor which he had attended, he had given chloroform in 1,500 without ill effects following. *Medical News.*

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PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The Intermediary Nerve of Wrisberg.

M. A. CANNIKER remarks that the nerve of Wrisberg has been the subject of much discussion. According to some authors, it was a motor nerve; to others, a sensory nerve. In 1878, M. MATHIAS DUVAL had made out an aberrant branch of the glosso-pharyngeal nerve toward the sensitive centre to which, according to him, the intrabulbar fibres of this nerve were directed. Having made some researches, said M. Cannieu, on the internal ear, he had observed certain facts which enabled him to confirm this interpretation. Thus, among rodents he had ascertained the existence, which had been denied up to that time, of the intermediary nerve of Wrisberg, on the other hand, among bony fishes, he had seen the cellular extensions united in bundles which, he said, should be considered homologous to the intermediary nerve of Wrisberg and as an aberrant branch of the glosso-pharyngeal nerve.—*N. Y. Med. Journal.*

The Anatomy of the Congenital Crescent Downward and Inward.

SALZMANN found that in these cases there is an absence of all signs of distortion of the choroid and of the adjacent inner layers of the sclera. The deep cutting in of the choroid on the side toward the crescent is also absent, as well as the distortion of the nerve-fibre bundles on the side toward the crescent. Throughout the entire region of the crescent there is a doubling in the thickness of the retina, but with partial incomplete development of the two laminae.—*Med. News.*

Primary, Secondary, and Tertiary Retinal Images after Momentary Light Impressions.

BOSSCHA draws the following conclusions from his observations:—

1. The consecutive retinal images appear in the purest and simplest form with the shortest possible illumination of a circumscribed region of the retina, with exclusion of every other source of light.
2. Contrast effects also occur in the vicinity of the retinal image by illumination with the electric spark.
3. The perceptive processes are more distinct when by local retinal irritation a contrast irritation is produced in the surrounding zone.
4. The perception image in its simplest form has three phases:—The primary image, which lasts longer than the illumination itself; the secondary image, which has the complementary color of the first, and is the more distinct the shorter the illumination is; the tertiary image, which has no definite color, and the duration of which increases with that of the illumination.
5. The third phase of the retinal image is distinguished by diminution of the sensitiveness for weak, objective light.
6. The image of a long-continued, homogeneous illumina-

tion is a complex process, composed of the accumulation of a series of light impressions immediately following each other.—*Bulletin of Med.*

Contaminated Ice and Cholera.

WEISS says:—Since the establishment of the relation between epidemics of cholera and water supply, interest has attached to the question whether cholera can be conveyed by ice which has been collected from a contaminated source. It has been many times shown that the cholera vibrio can bear low temperature for several days, and WEISS, as the result of his investigation on this subject, is able to confirm the observations of other workers so far as concerns water. But the cholera vibrio behaves quite differently in the presence of low temperatures when it is in a suitable culture medium. In broth, it remains alive for twenty-one days; in water, which contains much broth, it lives three days longer than in water to which only two drops of broth have been added. In pure dejects kept in the cold, cholera vibrios die sooner than in water, whence it is to be inferred that the vibrios which are present in choleraic discharges also die out in the cold in a few days. Communication of cholera by ice is therefore not to be anticipated, and this agrees completely with the fact that no case has ever yet been observed in which the infection has been carried by ice.—*B. M. J.*

The Parasites of Malaria.

As the result of studying over 600 cases of malarial fever in and about Baltimore, Professor WM. OSLER of the JOHNS HOPKINS University distinguishes three varieties of malarial parasites:—(1) The *Tertian parasite*, requiring about 48 hours for complete development and producing relatively regular tertian paroxysms of from 10 to 12 hours accompanied by heat, chill and sweating, &c. (2) The *Quartan Parasite* requires 72 hours for development and is associated with regular quartan paroxysms; while (3) *Estivo-autumnal parasite*, whose cycle of development has not been definitely determined, varies from 24 to 48 hours, and though its main seat of infection lies in the spleen, bone marrow and internal organs, it is often found in the peripheral circulation and produces fevers varying greatly in nature from quotidian to tertian intermittent fever; but more commonly being a more or less continuous fever, whose paroxysms usually last 24 hours but whose irregular remissions and temperature depend upon the length of the cycle of development and multiple infection of the parasite. Infection with two groups of tertian organisms produces quotidian paroxysms, while multiple groups give rise to irregular, sub-continuous fevers, whereas two group infection of the quartan parasite causes a double quartan fever with two-day paroxysms and third-day remissions: but infection with three groups is associated with daily paroxysms.

The Micro-Organism of Chronic Rheumatism.

SCHULLER has found a specific bacillus for chronic rheumatism. The organisms are described as measuring 3-6 x 0-85 μ , and are constricted at the middle. They stain well with carbol-fuchsin, but are easily decolorized by acids. They are said to grow fast at 25°C. in the dark. All the ordinary culture media are fitted for their development. SCHULLER inoculated the joints of rabbits with cultivations obtained from human joints, and succeeded in producing a non-suppurative arthritis analogous to the rheumatoid arthritis affecting man. Chronic rheumatism seems to be an entirely different disease from the acute form, from which SCHULLER has only succeeded in cultivating staphylococci and streptococci, never the specific bacillus above.—*Brit. Med.*

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Social Purity Work for Fathers.

We have a great deal to say in our literature about the confidence that should exist between a mother and her daughter, but we ignore altogether too much the frankness that should exist between a father and his son. It is not right to expect that our girls shall bear the whole burden of moral responsibility. Our boys must be taught that the world expects uprightness in a man just as much as it looks for it in a woman. If the men of to-day are protected by an unfair moral discrimination, that is no reason why the men of to-morrow should be so sheltered. If it is for women to elevate their conception of the moral standard for men, it is for the young men of to-day to adjust themselves to that higher measurement. A healthy frankness between the boys of to-day and their fathers is the first step. This is man's part in the aim for social purity. Women must cease condoning actions in men which they will not tolerate in women; men, to whom experience has come, must unfold it to the younger men. It is a favor to a boy that his feelings shall be analyzed for him by his father; that he be taught that his self-control, or his loss of it, means an ascent or a descent in the social scale. There is no harm in a father's pointing out these things to his son; the harm comes when the father neglects to do so. A young man should never be expected in any point of morality to experience what his father can explain and warn him against.—*Good Health.*

Some Hygienic Military Don'ts.

ACCORDING to one of our military journals, the following instructions have been put into the hands of every French soldier proceeding to Madagascar: Never go out without wearing your helmet, not even when the sky is cloudy. When bathing, never lie down on the ground; be content with sitting on your pack. Never go out fasting; never drink anything but boiled water, tea and coffee; never leave off your stomach flannel; never on any account drink alcohol or eat fruit, even though it resembles ours.

Action for Damages for Ruptured Perineum.

PERINEUM asks: "Are there any cases recorded in the law reports in which an action for damages in respect of a ruptured perineum due to alleged negligence has been brought against a medical man, and if so, with what result?"

The editor *B.M.J.* responds:—One such case was heard quite recently before Baron POLLOCK, *DUNKLEY v. LANSLEY*. Drs. CULLINGWORTH and HERMAN gave evidence in favor of the defendant, and the jury, without hearing the speeches of counsel, found that there had been no negligence, and returned a verdict for the defendant.

Sudden Death from Urethral Injection of Cocaine.

In the *Centralblatt für Chirurgie* for March 10, we find an abstract of an account published in *La France Médicale* by M. REOLUS, of a case in which sudden death followed an injection of about six drachms of a five per cent. solution of cocaine into the urethra. The urethral mucous membrane appeared to be quite intact, and the death was attributed to pronounced arterio-sclerosis and to the undue quantity of the drug employed.

In the above case, 15 grains of this drug are used—a dose so large that no excuse can be offered. I have seen syncope follow 3 grains injected in the urethra, and unpleasant symptoms follow 1½ grains; while no systemic symptoms have been in 2-grain injections.

Physicians cannot make disclosures in Actions for Services.

THE New York Code of Civil Procedure provides that a person duly authorized to practise physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity. In an action brought to recover for professional services rendered as a physician and surgeon, after the doctor had testified that he was a physician and surgeon, and as such was called upon by the defendant to treat him, he was asked to state what the defendant said to him about his physical affliction. This was objected to as incompetent and immaterial, upon the ground that the defendant, in making the statements to the witness, made them to a practising physician in his professional capacity, and that they were necessary to enable the physician to act in that capacity, etc. The objection was overruled, and the witness was permitted to answer, giving an account of a secret disease disclosed by the defendant to him which he subsequently treated. But the general term of the Supreme Court holds (*VAN ALLEN v. GORDON*, decided December 27, 1894) that this was an error, and reverses the judgment of the lower court. It says that it can see no escape from the provisions of this section of the code. It does not understand that the defendant had in any manner waived its provisions. He was sued, and was brought into court without his consent and compelled to litigate a claim made against him for services rendered. It might be claimed that he was guilty of a breach of contract in refusing to pay the physician for his services, but that question could only be determined by a trial. If the physician made exorbitant charges, the defendant was not obliged to pay. And the same might be said with reference to the defendant's answer putting in issue the allegations of the complaint. Whether or not he properly interposed his defence could only be determined by the trial. Neither of these acts amounted to a waiver of the statute. Had the defendant himself brought an action against the physician, alleging misconduct or malpractice, he doubtless would be deemed to have waived the statute. But the interposing of a general denial in an action brought against him could not be so treated. It was further urged that if the physician was not permitted to describe the disease with which his patient was afflicted, he could not show the value of his services, and that consequently it could not have been the intention to have the statute apply to a case like this. But the court thinks such a result does not necessarily follow. The physician could still testify to his employment, to the number of visits made, to examinations, prescriptions and operations, and, if the defendant objected to his describing them, the physician might testify as to the value. It might be that it would be impossible to corroborate the physician's testimony as to the value of the services, for the reason that he would not be permitted to disclose to other physicians the character of the services rendered, but the defendant would meet the same embarrassment when he undertook to dispute the value of such services.—*Journ. Am. Med. Assoc.*

THERAPEUTICS AND PHARMACOLOGY. *Sulphenal and Trional.*

SCHAUMANN has investigated the action of these agents on metabolism. Morphine considerably influences metabolism and the nutrition of the patient, and the evil effects of its long-continued use are in no small measure to be attributed to these facts. Chloral hydrate has much the same action on

the tissues. Similar investigations made with sulphonal and trional have hitherto yielded inclusive results. The author has made experiments upon himself. He found that trional had the more marked hypnotic effect. After putting himself on a given diet and producing nitrogenous equilibrium, he was able to show that neither trional nor sulphonal, even in large doses, has any action on metabolism. Hence the superiority of these agents over chloral hydrate, especially when it is considered that the latter also acts on the heart. —*Brit. Med. Journ.*

A Tooth-powder.

| | | | |
|------------------------|-----|-----|-----|
| R. Magnes. Carb. Pond. | ... | ... | 3j. |
| Pulv. Ostræ Prepar. | ... | ... | 3j. |
| Potass. Chlorat. | ... | ... | 3j. |
| Ess. Anisi gutt. | ... | ... | x. |

Fl. Pulv. —*Med. World.*

Pruritus Vulvæ of Menopause

Morphine sulphate, 8 grains (0.50 gramme); boric acid, 14 drachms (6 grammes); camphor-water, 6 fluidounces (186 grammes). Mix. Label: *Poison*. Apply to the affected parts after ablation with warm water and Castile soap. —(B. F. BAER, *Univ. Med. Journ.*)

Antiseptic Powder: Substitute for Iodoform.

| | | |
|---------------------------------|-------------|-------|
| R. Hydrang. chlor. corros., gr. | 1-5 vel gr. | 1-3. |
| Acidi boric | ... | 3j. |
| Acidi tannici | ... | gr. x |
| Sacch. lact., q.s., ad | ... | 3 ij. |
| M. Sig.—Antiseptic powder. | ... | ... |

A fifth of a grain of corrosive sublimate in this mixture gives a powder of the strength of 1 to 5,000, and a third of a grain, 1 to 3,000.

In preparing this powder care must be taken by the druggist to mix the sublimate very gradually and thoroughly with the sugar of milk, and then to add gradually the other ingredients, so as to be certain to obtain a uniform distribution of the bichloride in the mixture. —*Med. Age.*

For the Pains of Chronic Rheumatism.

| | | |
|--------------------------|-----|----------|
| R. Acid. arseniosi | ... | gr. 1ij. |
| Pulv. guaiaci. | ... | 5ij. |
| Pulv. capsici. | ... | 3ss. |
| Pulv. aloes et asafetide | ... | 5ij. |
| M. Fl. pil. no. cxx. | ... | ... |

8.—One thrice daily. —*The Practitioner.*

Lettuce Salad.

PREPARE the lettuce by washing each leaf separately in cold water, rejecting any portion that may be bruised or brown. Drain on a fresh towel or napkin and place in a dish on ice or in some cool place until needed. When ready to use, if the leaves are too large, tear them in pieces with the fingers or a fork (do not cut with a knife), rejecting the large and harder portion of the midrib. Serve with a dressing of strained, stewed tomato and lemon juice, in the proportion of one table-spoonful of lemon juice to one small cup of tomato, with salt to season. A garnish of the chopped or grated yolks of hard boiled eggs makes a pleasing addition.

Oatmeal Cheese.

THIS dish is usually prepared from milk which has curdled from lack of proper care, or from long standing exposed to the air, and which is then to some degree decomposing. But the fact that the curd of milk is coagulated by the use of acids, makes it possible to prepare this dish in a more wholesome manner without waiting for decomposition of the milk. Add to each four quarts of milk one cupful of lemon

juice; let it stand until coagulated, then heat slowly, but do not boil, until the curd has entirely separated from the whey. Turn the whole into a colander lined with a square of clean muslin cloth, and drain off the whey. Add to the curd a little salt and cream, mix all together with a spoon or the hands, and form into cakes or balls for the table. The use of lemon gives a delicious flavor, which may be intensified, if desired, by using a trifle of the grated yellow rind.

Steamed Eggs with Tomato Sauce.

BREAK eggs into individual egg or vegetable dishes, salt very lightly, and place the dishes in a steamer over a kettle of boiling water until the whites are set and a film has formed over the yolk. Serve hot with a dressing of hot stewed tomato which has been rubbed through a strainer to remove seeds and skins.

New Treatment of Diabetes.

AT the last meeting of the Academy of Medicine, DR. A. ROBIN referred to a mode of treating diabetes which he has found successful. For the first period of treatment, which lasts five days, he gives cod-liver oil, alkaline mineral waters, antipyrin, and Solignette's salt. During the second period, occupying fifteen days, he prescribes sulphate of quinine arseniate of soda, alkalies, and 40 centigramme doses of codeine per day. The first five days' medicaments is also continued. Opiates commence a third period of ten days. DR. ROBIN finds belladonna also very useful, while he uses bromide of potassium as an accessory. A fourth period of treatment with tonics has also been tried where the diabetes has been overcome and the patient requires strengthening. DR. ROBIN states that he has obtained twenty-four complete cures out of 100 patients. —*Med. Times and Inop. Gaz.*

Correspondence.

THE CONTROVERSY ON THE ACTION OF STRYCHNINE IN COBRA POISON.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In sending the accompanying communication for publication in your journal, I feel it to be necessary to give you my credentials in order to be allowed to enter in your columns, into the controversy on the strychnine treatment of snake-bites. For more than eleven years I have been engaged in the teaching of Physics, Chemistry and Physiology to students preparing for the University examinations in one or other of the three first-grade Government Colleges in this Presidency. Before entering upon this educational work, I studied Medicine, and have passed the first M.B. and C.M. examination of the Madras University. I have all along been taking some interest in all scientific questions bearing upon the progress of medicine. The subject of the controversy on which I write is one of great importance, and there is an old traditional belief in India that habitual eaters of NUX VOMICA are proof against snake-bite. My object in writing the present article is to evoke a closer and more complete examination of the subject, and I trust you will do me the honour of giving my article as prominent a place as you think it deserves.

Although you have pronounced in your issue of the 18th June 1895 what appears to be your final opinion on the controversy relating to the treatment of snake-bite by strychnine, I cannot believe you have really come

Dr. Elliot states that the last word has been said on the matter. I therefore request you to be kind enough to find space for this commendation in your columns. I think the fact that I do not belong to the medical profession will not in itself be an unimportant consideration in inducing you to comply with my request and to overlook whatever there may be of presumption therein.

Dr. ELLIOT'S experiments on carefully selected animals conducted so well in the Biological Laboratory of the Presidency College here in Madras, have given occasion to this controversy. But the main problem that has to be solved is not whether strychnine acts as an antidote to snake-poison in the case of animals other than man. Dr. MUELLER, the champion of this strychnine treatment of snake-bites, himself says that it does not. Can it then act as an antidote to snake poison in the case of man? This is indeed the crux of the controversy. Obviously there are only two ways of finding an answer to this question: firstly, by means of analogical reasoning from experiments on animals; secondly, by means of clinical observation in cases of snake-bite in man. Before, however, this latter course is allowed to be adopted, it must be well made out that there is not only no intrinsic improbability in the antidotal nature of the proposed treatment, but that physiological and therapeutical considerations point clearly in its favor.

Dr. ELLIOT relies upon the former method of research in the same way in which Dr. MUELLER relies upon the latter; and when doctors differ, it is of course, dangerous for laymen to interfere. Nevertheless, an attempt to give an impartial statement of the position of each of them cannot but be of some value. Dr. MUELLER says that the strychnine treatment of snake-bite has proved positively successful in Australia, and I am not aware if this statement of his has been openly contested and proved to be untrue by means of experiments scientifically conducted for the purpose, in Australia. It is not scientific stily to sneer at this treatment, because it also, like Dr. HALFORD'S ammonia treatment of 25 years ago, hails from Australia, which country can no more be the land of scientific and medical bogies than India or England or any other part of the world. I am sure it is known to all those who take an interest in the subject matter of this controversy that, even before Dr. MUELLER of Australia, certain eminent doctors of the Indian Medical Service had pointed out the probable antagonism existing between strychnine and cobra-poison. Indeed this fact was mentioned recently in some Indian medical journal to prove that Dr. MUELLER is not the discoverer of this antidote to snake-poison. Dr. ELLIOT'S paper, as given in the *Indian Medical Record* of the 1st February 1895, contains a very fair statement of the symptoms of strychninisation as well as of cobra-bite; and students of toxicology will find even in that statement enough to suggest a probable antagonism between the physiological effects of strychnine and cobra-poison. As a matter of fact both Dr. ELLIOT and Dr. MUELLER depend on conclusions based on—analogy. The analogy which Dr. MUELLER relies upon, is that which exists between Indian snakes and Australian snakes, while the analogy that Dr. Elliot rests his arguments upon, is what is to be found between the nervous system

of man and that of the lower vertebrates. Surely the "every kind of analogy" existing between European snakes and Indian snakes must be, while in scientific accordance with "the theory of evolution, the basis of comparative anatomy and physiology," very much stronger than the "every kind of analogy" existing "between the nervous systems of man and the lower vertebrates." Under these circumstances, it is certainly unfair to characterise the strychnine treatment of snake-bites in man as a mere experiment on human lives. On the other hand, there is much in it to justify clinical observation other than in its "empiric" sense as given by Dr. ELLIOT.

It is not wholly right to say, as Dr. MUELLER does, that between the nervous system of man and that of the lower animals there is "only a functional analogy which has been mistaken for a complete identity." It is rather difficult to make out the exact meaning of this statement, but surely even Australian doctors cannot be allowed to defy the truths of comparative anatomy and physiology. We have as yet no such science as comparative therapeutics definitely formulated, and until we acquire it, we cannot be too careful in drawing inferences regarding the effects of drugs on man from their effects on lower animals, particularly when such drugs act directly on the nervous system. There is no doubt that the theory of evolution is largely based on the anatomical and physiological analogy existing between the various progressively classified species of animals. But evolutionary progress also presupposes the gradual development of structural and functional differentiation among them. That such of these variously differentiated conditions of animal life has its own peculiar influence on the therapeutical effects of drugs is well known to all students of scientific medicine, although in many cases very little has been made out as to how and why such influences are produced. Regarding the evidence of poisoning derived from experiments on animals, REES says in his *Manual of Toxicology*—

"The animals best adapted to this purpose are the dog, the cat and the rabbit—especially the former; and in certain cases, the frog. Birds are particularly unsuited for experiments of this sort, since they are affected so very differently from man and the animals just mentioned. The exact sort of information obtained by such experiments seems to be limited to proving the fact of poisoning. We can gather no certain data from them relative to the dose, the rapidity of absorption, the deposition or elimination, in reference to man. We may also, occasionally, learn something of the physiological and pathological action of poisons. The instances of the remarkable discrepancy in the doses of poisonous substances necessary to produce death in men and in lower animals are numerous. Moreover, it should not be forgotten that there are some poisons, derived chiefly from the vegetable kingdom, that prove quite innocuous to certain animals, although very dangerous to men. The rabbit, for example, according to M. RUSON of Berlin, will eat, and thrive upon the leaves of belladonna, hyoscyamus, and stramonium; although on killing the animal the absorbed poisons may be discovered in its body. The goat and sow will eat the leaves and stock of the stramonium with perfect impunity, yet their milk may prove poisonous to those who drink it. One insect, at least, is known that can feed and flourish

as strychnine. The fact is undoubtedly that while certain animals, birds and insects, can eat poisonous plants with impunity, the flesh and secretions of those creatures prove highly poisonous to human beings."

There are instances enough in the above quotation to show that specific modifications in the anatomical and physiological condition of animals have also a modifying influence on the therapeutical effects of poisons; and Dr. ELLIOT himself is not unaware of this important scientific fact. He points out in his valuable paper that the injection of cobra-poison produces in monkeys two additional symptoms which he did not notice in any of the other animals he experimented on, viz., the drooping of the upper eyelids, and what he has described as *drunkenness*. Both these are clearly enough cerebral; why do they appear in monkeys, while being evidently absent in animals of comparatively lower organisation? Have we anything here to do with the fact that in the higher vertebrata the reflex activity of the nerve centres in the spinal cord is largely controlled by the superior influence of the highly developed brain centres? That the spinal cord plays a more important and active part in the physiology of lower animals than in that of man is a fairly well-established conclusion of comparative physiology. This may in a way lead us to an explanation of the characteristically greater sensitiveness of some at least of the lower animals to strychnine. The well-known frog-test for strychnine, proposed by Dr. MARSHALL HALL, may well be taken into consideration here. In this test a frog, if immersed partially for a few minutes in a solution of strychnine containing, according to TAYLOR, even less than $\frac{1}{100000}$ part of a grain, is "suddenly seized with tetanus, and the body and limbs remain rigidly extended." Dr. HARLEY confirms this test, and holds that $\frac{1}{100000}$ of a grain produces the characteristic convulsions. May it not be that this kind of probable relation, existing between the relative importance of the spinal cord in the economy of any of the lower animals and its peculiarly exaggerated sensitiveness to strychnine, has something to do with the failure of the strychnine treatment of snake-bite in them? How this relative importance of the spinal cord in the economy of an animal is related to its position in the biological scale of development has not as yet been well made out by students of comparative physiology. May not the effects of the cobra-poison also on any animal be dependent upon this unascertained relation as those of strychnine seem to be? In regard to questions like these, it is never safe to dogmatise; and in dealing with them it is incumbent on every scientific enquirer to bear in mind that cocksure conclusions are not only inadmissible, but also often misleading. The physiological and anatomical difference of man from the lower mammalia is certainly as much to be taken into account in such discussions as the "every kind of analogy" existing between them.

There is a case of snake-bite reported in the *Indian Medical Gazette* of May 1894, by Surgeon-Captain H. SMITH of the Indian Medical Service, wherein he observes "strychnine seems to have had a controlling influence over the poison of the snake." This is a case which resulted in the death of the patient, and in which the variety of the snake had not been made out; nevertheless the strychnine appeared to relieve the drowsiness,

the comatose condition, and the drooping of the eyelids of the sufferer. How did this happen?

In his reply to Dr. ELLIOT's paper, Dr. MUELLER points out that the action of strychnine on man is rather peculiar in that we have a long well-marked premonitory period that precedes the characteristic dangerous convulsions. This premonitory period with animals is short and scarcely discernible." It may be taken as fairly well established that man is not quite so sensitive to strychnine as the lower animals. Whether the sort of physiological explanation of this, suggested in the previous paragraph, satisfactorily accounts for this, or no, is quite a different matter. "If man were as sensitive to this useful drug," says Dr. MUELLER truly, "many thousands to whom it is prescribed would perish every year." It is no wonder that such differences do exist between the various species of animals in regard to their sensitiveness to particular poisons, especially so if we bear in mind what is known as individual idiosyncrasy relative to the action of drugs on man himself. Dr. MUELLER is certainly wrong when he says that Dr. ELLIOT in his experiments confounds chemical with physiological action in antidotes." He does no such thing. He holds that as a physiological antidote to snake-poison in man, strychnine is worthless, if not harmful, because experiments on animals lower than man have all led to uniformly unsatisfactory results. Do man and the lower animals react alike to strychnine and to cobra poison? In man cobra-poison seems to act as a cerebro-spinal neurotic depressant. In monkeys also it seems to act somewhat similarly, as made out by Dr. ELLIOT himself. It is, however, not at all proved from this, that between the action of cobra-poison on man and on monkeys there is no difference whatsoever; all that we know for certain is that there is, as may well be expected, a closer resemblance between the action of the poison on man and the monkey, than on man and any other lower animal; and in testing the supposed antidotal nature of strychnine to snake-poison solely by means of experiments on monkeys, it has also to be positively proved beforehand that strychnine itself acts alike in every respect both on man and the monkey. In animals lower than the monkey in the scale of biological organisation cobra-poison apparently acts as a spinal neurotic depressant, the cerebral effects, if any, not being marked and noticeable at all. Strychnine is generally known to be a stimulant spinal neurotic poison, but there are cases on record in which it seems to have exercised cerebral effects in man. One such case of snake-bite has already been referred to in this communication. Surgeon-Captain J. C. VAUGHAN of the Indian Medical Service has given another case of snake-bite in the *Indian Medical Gazette* of August 1893, where we have very clear indicatives of strychnine having relieved successfully the head symptoms of a man bitten by a snake. It is therefore certainly doubtful, to say the least of it, whether man and the lower mammalia react fully alike to the two poisons we are considering, and under such circumstances analogical reasoning, from the results of experiments on lower animals, when applied to man, is apt to prove fallacious and inconclusive. It is not at all to be understood from this remark that experiments on animals and inferences from such experiments

are declared to be altogether illegitimate. At best all such experiments have only to be taken as suggestive, and it is needless to mention that even scientific suggestions, as derived, regarding the treatment of diseased conditions in man, require to be verified by clinical observation at the bed-side, of human patients. Until our knowledge of the comparative physiology of the nervous system of animals becomes fuller and sufficiently satisfactory, and until we acquire the knowledge of the much-needed science of comparative therapeutics, it is worse than useless for vivisectionists and biological experimenters to fight against the rational and responsible clinical work of doctors, although their procedure has often, necessarily, to be more or less empirical.

When the spirit of controversy is on, the sweetest of tempers becomes acrimonious, and the clearest of visions partial and imperfect. This is apparently a matter of necessity in the nature of man, quite as much as the other fact that all men are, as if unconsciously, led to think highly of their own achievements. If DR. MUELLER "employs the weapon of abuse" DR. ELLIOT seems to be satisfied with the eloquence of insinuation. These are, however, matters with which no science other than psychology has any immediate concern. Abuse and insinuation apart, we find DR. MUELLER answering DR. ELLIOT thus:—1. The experiments on animals prove almost nothing that has not already been known, regarding the break-down of the nerve-centres of lower animals under the combined strain of snake-poison and strychnine; and as such, they are most uncalled-for. 2. Even from a general point of view, the conclusions drawn from them as affecting man are conclusions from analogy, and cannot be admitted to be final in any scientific enquiry. 3. The results of TSKISTOW's experimental researches are acceptable and instructive in so far as they relate to the elucidation of the several physiological actions of snake-poison. 4. It is proper to expect chemical antidotes of poisons to act exactly alike on all animals, but strychnine is a physiological antidote to snake-poison, and as such acts differently on man and the lower animals. This answer of his is certainly not as full and clear as it might have been, but the position taken in it, is not after all so weak as to be lightly ignored or laughed away.

In your editorial remarks of the 16th June 1895, you refer to the case carefully recorded by Surgeon-Major CADGE and Surgeon-Captain PRATT in the *Indian Medical Gazette* of October 1892; and I request your permission to quote their concluding remarks on that case, here. They say: "We are well aware of the many fallacies surrounding cases of snake-bites, and have neither the wish nor the intention of drawing conclusions from the happy termination of a single isolated case. We have thought it worthy of record for three reasons: Firstly, there is absolutely no doubt that the boy was bitten by a snake. Secondly, because there is absolutely no doubt that the snake was a cobra. We have the identical snake preserved in spirits. In how many cases of so-called cure of snake-bite is there any proof that the offending reptile was really one of the *Thamnophtidia*? And thirdly, because our patient recovered from the effects of the

bite, plus the effects of two-thirds of a grain of strychnine introduced into his system by hypodermic injection. (For a short time it almost appeared as if the patient were about to succumb to the effects of the remedy.) Whether the poisons were in any way antagonistic to each other is another matter. Be this as it may, we shall have no hesitation in trying strychnine again should the opportunity occur."

Here is at least one worthy case for DR. ELLIOT to take into serious consideration. It must, of course, be granted that the over-dose of the antidotal strychnine on a snake-bitten man produces effects positively different from, and more injurious than, 'mere flea-bites' and 'source of amusement.' Yet the recovery from the combined effects of such an over-dose of strychnine and the poison of the cobra must remain inexplicable if the physiological antagonism of the two poisons cannot be believed in. There are also numerous other cases recorded in which decidedly large and poisonous doses of strychnine have not produced their well-known characteristic effects in persons known to be bitten by snakes. How are we to account for the greater tolerance for strychnine exhibited by such persons under such circumstances? It will not do merely to assert in reply that the tolerance of man for strychnine is naturally greater than it has been supposed to be hitherto. To say that strychnine, like brandy and water, only tends, under greater risk to life, to restore people from the depressing effects of fright, usually present in all cases of supposed snake-bite, is an equally untenable position to hold. Both these positions have still to be proved as true; they now rest on no evidence worth mentioning. But one such case as that recorded by DR. CADGE and PRATT is enough to vitiate, to an appreciable extent, all analogical reasoning like that indulged in by DR. ELLIOT; for, as they say, the strength of a chain, is measured by that of its weakest link. However, it is out of the heat of controversy that truth comes out brightened and purified of all its covering of dirty-looking dross. More patience and more charity are imperatively needed among workers in the medical profession, which is undeniably one of the most humane of all professions. Let not truth of any kind be discarded, nor untruth accepted, in the maddening rage of controversy, on insufficient and inconclusive evidence; and all will be well in the end.

It is a pity that DR. BANERJI has been treated with scant courtesy in some quarters, in the course of this controversy.

Yours, &c., M. RANGACHARYA, M.A.
Second Lecturer, Govt. College, Kumbhaknam.
TRIPPLICANE, MADRAS, 5th July 1895.

MEDICAL REFORM IN INDIA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—The movement for medical reform in India for a separation of the Civil and the Military Medical Services, with reconstitution of the civil branch and advancement and proper recognition of its subordinate grades, having enlisted general approval and sympathy, both in India and in England, it has been the feeling of several members of the profession in India and their friends in England that

the time has arrived for a united and sustained effort to secure success to this movement by a thorough organization. The objects the reform aims to attain are, as is now well known, catholic in character, and comprise not only the good of the Indian profession in its various grades, but also the interest and welfare of the public at large and the taxpayer in particular, who would be materially relieved of a considerable portion of the burden of the present military charges.

The reform seeks to throw open to the profession at large, and the Indian profession in particular, the fields and opportunities of scientific work, which have hitherto been denied them. A fair field and no favor to *cast wherever found*, and merit and special training—the only passport to seats of learning and scientific work—are the guiding principles of the proposed reform. It seeks to completely do away with the great evil and mischief now at work in the medical administration of the country, and which is the result of a system which, in the words of Mr. EARNER HAST, is radically wrong, the I. M. S. man being expected by Government to be fit for any post that may be vacant; a system in which men work their way up by seniority to positions for which they are quite incapable.

To compass these ends the reform advocates:—

1. Separation of the Civil from the Military Medical Service of the country, with the formation of one military medical service for India—divided into an European Army branch and a Native Army branch, and in fact the military members of the Indian Medical Service are, at present, under the orders of the head of the European branch medical service, called the Army Medical Service.

2. Re-organization of the Civil Medical Service, reconstituting it as a purely Civil Medical Service, recruited from the open profession of medicine with a due leaning towards the utilisation of indigenous talent, of proved merit and ability, other things being equal.

3. Proper recognition and advancement of the Civil Assistant Surgeons and Hospital Assistants and their absorption into the Civil Medical Service of India.

In order to bring about these results both time and money are required; a sufficiency of funds will secure the desired persistent agitation so necessary to the success of every reform movement. It is proposed to agitate the matter, both in India and in England, by representations in proper quarters, and by sending a delegate to England who would place before the British public, the profession and the authorities, the case of the profession in India, and enlist their sympathy and co-operation in securing the favorable attention thereto of those in power in England. The House of Commons will be appealed to, and it is confidently hoped that it will not be long before some at least, of the reforms set forth above are taken up and carried out.

In order to make the movement thoroughly representative of the Indian profession, Local Committees styled the Bombay, Calcutta, Madras and Lahore, etc., Committees for medical reform in India are being organized and a fund called the Indian Medical Reform Fund has been started. The funds collected by the several Committees will be amalgamated into one general fund, and the same will be utilised to the best advantage towards the objects of the reform as above set forth. The cordial co-operation of all members of the profession is requested, and you will

we trust, assist and advance this movement with your subscription and year assistance.

It is gratifying to notice in the *British Medical Journal* of July 13th, that the organ of the British Medical Association is convinced that our reform programme must sooner or later be adopted. And soon after this we received the glad and reassuring cable message of a warm advocacy of the reform by the British Medical Association at their annual meeting in London on the 1st instant. Such influential support will, no doubt, lighten our work and precipitate action by the authorities. A summary of the whole programme endorsed by the *British Medical Journal* is thus pithily given in its issue of July 13th:—“(1) The need of putting a stop to Military Surgeons going into Civil employ or duty. (2) To cause all Military Surgeons now in Civil work to return to Military duty. (3) To throw the so-called ‘expert’ or ‘specialist’ posts and leading appointments open to competition in India and in England. (4) To instal the Unconvenanted as the nucleus for the Indian Civil Medical Service and to fill up all civil vacancies from the special additions that will be made to this service. 5. To utilize Military Surgeons and Assistant Surgeons with British and Indian troops under a central organisation, which is tantamount to the amalgamation of the Army Medical Staff and Indian Medical Service.”

We give the names of members who have up to date signified their consent to serve on the Committee and subscriptions volunteered at a preliminary meeting held on the 3rd of July last:—

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Hon. Secretaries, Bombay Committee for
Medical Reform in India.

BOMBAY, August 7th 1895.

"THE SECONDING OF MEN IN CIVIL EMPLOY."

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Sometime ago in the remote past, I first heard that the Indian Government had under consideration the idea of seconding all our men who were in "Civil employ." This meant that there would be a promotion made in place of every Medical Warrant Officer, whose services were placed by the Military, at the disposal of the Civil, permanently. Of course, I was prepared to allow that the carrying out of this idea would take some considerable time. From then until now "refreshers" have come across our way, and we have taken heart and looked forward again with hope, to its consummation in the near future. Not long since, i.e., a couple of years ago, I saw something about the same thing in one of the issues of the *Civil and Military Gazette*. For some months I have not seen nor heard anything of this "phantom," and have begun to think lately that it has been thrown out, and will not be carried into effect after all. Sir, have you heard anything of it? Can you give us any hope that the seconding of civil employed men will be carried out at any time, no matter how far off in the distant future? I keep a small copy of the Army List, and study it so far as it concerns us, very carefully.

The study has convinced me that our promotions are slow, much slower than in other departments. Take for instance the first twelve names in the list of first class Assistant Surgeons (over five years service). These men have been in the department since April 1864—perhaps a couple or three of the first from 1863—they have therefore over 31 years' service, and have been Warrant Officers for at least 28 or 29 years. Of this number six men have but a very slender chance of becoming Surgeon-Lieutenants until the latter half of 1897, or the first quarter of 1898, when the youngest of them will have had *thirty-two* years' Warrant Service. What chance have these men of being physically and mentally "fit" to stay on and qualify for the higher pension of Senior Assistant Surgeon, 1st class; considering the worrying and harassing nature of their duties? I say emphatically, for the *majority*, NONE. There are, no doubt, a few with whom time has dealt with a gentle hand, and they have been blessed with a temperament which would allow no cares to distress them out of the ordinary, these few will smile through and keep right side up until the recurrence of that birthday of theirs, which will bring them face to face with the age limit.

There are some who will say there is much to be said on the other side also, and that the members of the Indian Subordinate Medical Department are paid and treated quite as well as they deserve, and that they are a class of mankind who come under the head and class of "dissatisfied." I will not take up very much more of your time or space. I will therefore conclude by giving you an account of an unpleasant experience which occurred to me lately, and it may go some distance to prove that there is something on our side too, which would bear a little looking into.

In the seventies I was a good deal amongst men of the "Ordnance Department"; a few months ago I had some official business to transact in an arsenal, and while there, had to see two men who were quite well known to me. In the seventies they were: one an officiating Magazine Sergeant, the other was permanently in the Department as

a Sergeant with a couple of years' service in it. Now one is a Lieutenant, and the other a Captain. At that time I was 3 years a Warrant Officer. As in duty bound, I made my appearance before each of these and made the usual salute after the most approved fashion in use now, and they returned it listlessly, by raising the right hand a little and pointing the index finger a little upward just as they had seen other officers do to them in the past. They had not been specially promoted, but had taken their regular turn, and though very much behind me at start, had beaten me hollow in the race of life.

The beauty of it was that one of these gentlemen was rather looked upon as a "snob" by those who knew him in the old time, and when I came before him and had to salute him as a superior officer, I certainly felt a sympathy for Joseph's elder brethren, who had to make obeisance to him; only perhaps the brethren in their fear failed to recognize their younger brother, but I knew my man straight off.

Yours, &c. JOB.

20th June 1895.

THE EXTENSION OF FIFTY-FIVE YEARS' RULE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Having perused a letter from "MILES" in your issue of the 1st June 1895, page 422, re the extension of the Fifty-five Years' Rule, by a Government of India Notification, I am of opinion that this new departure will undoubtedly be a block to the Junior Assistant Surgeons of the Indian Subordinate Medical Service, thereby being an injustice to men who have taken the trouble to enter a service, the prospects of which, regards future promotion have only during the last couple of years presented signs of much cream.

There would be no *pique*, if Assistant Surgeons were granted an extension, as long as they were placed on a Supernumerary List, thus causing no bar in the promotion of junior men. As far as their military capacity for active service (a point on which "MILES" lays much stress), I apprehend this question could best be answered by ordering a large number at present nearing the fifties, across the frontiers; but here again we should stay and consider that these men have been our pioneers, and during their younger days had had more hardships, *eg.*, marching and campaigning than those junior in the service, hence if they were allowed an extension, they could with ease and comfort fill up gaps caused by junior men ordered away in the event of war, their services then would be an invaluable aid to the State.

Further, I beg to suggest that the members of the Indian Subordinate Medical Service memorialised Government on this subject, praying that the above-mentioned suggestion be brought into force.

Yours, &c. A. O. M. R.
Bombay**THE MEDICAL CONGRESS ANNIHILATED.**

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In sending you an extract from the occasional notes published in the columns of *Power of Calcutta* in its issue of the 28th July 1895, I wish to suggest that unless a suitable retaliation is forthcoming, the faith of the

medical faculty to the Congress and its good motives may be mistaken, and also requires you to take such notice as you may think it deserves.

Extract referred to above:—"The Medical Congress, a *farce* put up last year in December, is once more to the front; this time not, however, in the form and manner that it had assumed last year, but in the shape of a *scholarship* report. A novel means has been adopted for its *aim*, quite a *rubbish* as it is. If the outcome of such a *body*, as the whole post of all the leading members of the *leading* art be a report, and a report only, without even an attempt at introducing any salutary measures in the profession or in the sanitary condition of the several municipalities, then it were better if there *would* have been no Congress at all. Nothing short of practical reforms will justify such a gathering, and we have reasons to fear that the members of the faculty, who had travelled long distances to be present at the gathering, were *profoundly* disappointed owing to its nature of business. The *Pioneer* may well advertise the report with its long list of contents, may hawk that a few copies only were available, but there is not a dunce to exchange silver for such trash."

Yours, &c., V. C. RAMALINGA MUDALIAR, L.M.S.

Medical Officer.

MANAMELKUDI, TANJORE DISTRICT 5th August 1895.

(Rather hard hitting, and not altogether suitable.—ED. J. M. E.)

REVIEW.

GUN-SHOT INJURIES: their history, characteristic features, complications and general treatment, with statistics concerning them as they have been met with in warfare: By Surgeon-General SIR T. LONGMORE (Retired), C.B., Q.U.S., F.R.C.S., late Professor of Military Surgery in the Army Medical School, Associate of the Society of Surgery of Paris; Corresponding Member of the Academy of Medicine of France, &c., &c. Second edition, illustrated with 78 wood-cuts. (Publishers, Longmans, Green & Co., London, 1895.) Pages 821. Price 31s. 6d.

This most comprehensive treatise on gun-shot injuries, written by a master, consists of 11 sections and an aggregate of 56 chapters, together with an Appendix of references quoted, with an account of the Geneva Convention of 1864, in which Dr. Longmore took an active part, and a copious index. There are 78 wood-cuts scattered throughout the work, illustrating the letter-press. Dr. LONGMORE says in his *avant-propos* the general plan of his treatise, "that the history of the successive changes which have taken place in the characters of gun-shot injuries since they were first presented in warfare, will not be found in any special chapters on the subject. It is believed that this arrangement will have the advantage of being less formal, and of leading to a clearer understanding of their principal features as they are exhibited at the present day."

The first edition of this great work came out in 1877. After a lapse of 17 years, during which, vast and material changes in weapons, armaments, methods of warfare and Military Hospital organization have taken place, the present (the second) edition has been issued. These changes and advances are fully discussed in the pre-

sent volume, and the information contained in the former edition on many other topics has been revised and brought thoroughly up to date. We consider this work absolutely indispensable as an addition to the bibliographical armamentarium of the military surgeon, and especially to the host of young surgeons aspiring for military service. As a work of reference in times of difficulty, the succinct arrangement of the various chapters renders ready reference to them easy. For this use alone, the treatise stands, to our reckoning, quite unique. The 11 sections present briefly, the following aspects of the subject:—

- Section 1. Gun-shot injuries and how produced.
- " 2. Causes influencing nature, progress, &c., of gun-shot injuries.
- " 3. Signs and distinguishing features of gun-shot injuries.
- " 4. Primary symptoms and complications of gun-shot injuries.
- " 5. Aids to the diagnosis of gun-shot injuries and complications.
- " 6. Occasional complications of gun-shot injuries.
- " 7. Ulterior consequences of gun-shot injuries.
- " 8. General treatment of gun-shot injuries.
- " 9. Arrangements for the care and treatment of wounded soldiers in time of war.
- " 10. Gun-shot injuries in general, nosology, classification, &c.
- " 11. Statistics of gun-shot injuries in warfare.

We can thoroughly recommend the work to all surgeons military or otherwise.

Government Medical Gazettes.

GOVERNMENT OF INDIA.

Second grade Mily. Hosp. Asst. Kutubuddin is transferred permanently to Civil Dept. of Burma.

The services of first class Mily. Asst. Surgn. E. P. Clement are placed at disposal of Govt. of N.-P. and Oudh.

First class Hosp. Asst. Kataru Ram, attached to Morwara Battalion, was granted 60 days' leave of absence on full pay, from 28th June.

Priv. leave granted to Surgn.-Maj. J. Crofts, M.D., I.M.S., (Beng.), Med. Officer of Kotah and Jhalawar Agencies, is further extended to 6th August.

Surgn.-Maj. R. J. Baker, M.D., I.M.S. (Bombay), off. Med. Offr. of 2nd Regiment, Central India Horse, and off. Goona Political Agency, is apptd. to office as Med. Offr. 1st Regiment, Central India Horse and of Western Malwa Political Agency, from date of assuming charge and during absence on leave of Surgn.-Capt. T. W. Shaw, M.A.

The undermentioned medical officers have been permitted by the Secretary of State for India to retire from the service, from the dates specified:—Surgn.-Col. Alexander Porter, M.D., I.M.S., Madras Establishment, 10th July; Surgn.-Lieut.-Col. James O'Malley McDonnell, M.D., I.M.S., Bengal Establishment, 29th July.

In continuation of this Office Notification dated the 19th June, 1895, Surgn.-Maj. H. N. V. Hartogson, (Madras), Off. Asst. Surgn. in Meywar, returned to duty on the afternoon of the 23rd July, 1895, from the sick leave granted him in this Office Notification dated the 14th May, 1895, which is hereby extended by four days.

First class Hosp. Asst. Ashgar Ali Khan, attached to the Baluchistan Agency Hosp., held charge of the Chaurahia Disp. and of the Hospitalary Jail, in addition to his own duties, from the 15th June to 6th July, 1895.

The first charge of the Magistrate Jail at Abu was transferred to the charge of the 9th July 1925, from first class Hosp. Asst. Surgn. A. M. Khan, attached to the Rajputana Agency Hosp., to third class Hosp. Asst. Motilal Bhattacharya, in charge of the Charitable Disp.

Surgn. Lieut.-Col. A. Adams, M.D., I. M. S. (Madras) has been appointed to the Western States of Rajputana, and has arrived on the afternoon of the 13th instant, of the privilege leave granted him in this Office Notification, dated the 25th June 1925.

BENGAL GOVERNMENT.

Surgn.-Maj. T. E. Macdonald, Civil Surgn. of Saran, is allowed priv. leave for 90 days, from 28th August.

Asst. Surgn. Kali Prasad Kumar, a superny. at Med. Coll. Hosp., is apptd. to do superny. duty at Presy. Genl. Hosp. until further orders.

The undermentioned Asst. Surgn. having passed prescribed exam., is promoted to grade noted opposite his name :—

Surgn. Das Bhattacharjee, from 2nd grade, promoted to 1st grade; 1st May 1925.

Asst. Surgn. Bhogobutty Kumar Chowdhuri did duty at the Presy. Genl. Hosp. from 21st February to 5th April.

Babu Dino Nath De made over charge of Jalpaiguri Jail to 1st class Asst. Surgn. W. A. Williams on 16th July.

Surgn.-Lieut. Col. F. R. Swaine made over charge of the Ranohi Jail to Surgn.-Lieut. L. Rogers on 10th July.

Surgn.-Capt. F. P. Maynard, Offg. Resident Physician, Med. Coll. Hosp. and Professor of Pathology, Med. Coll., Calcutta, is allowed priv. leave for thirty-seven days from 21st June.

Surgn.-Capt. A. R. S. Anderson is apptd. to act as Professor of Comparative Anatomy and Zoology, Med. Coll., Calcutta, during absence on leave of Surgn.-Capt. A. W. Alcock.

Asst. Surgn. Uma Charan Roy is apptd. to do superny. duty at Med. Coll. Hosp., Calcutta, from 26th July.

Asst. Surgn. Uma Charan Roy, a superny. at Med. Coll. Hosp., is apptd. to have temporary med. charge of sub-division and dispy. at Nator in Rajshahi Dist., during absence, on deputation, of Asst. Surgn. Gunga Gobindo Sarkar.

Asst. Surgn. Hera Lal Dutt, offg. at Nator sub-division and dispy. in Rajshahi dist., is allowed leave for one month and 12 days.

Asst. Surgn. Suresh Chunder Banerjee, a superny. at Med. Coll. Hosp., is apptd. to med. charge of Puri Dispy., vice Asst. Surgn. Syam Nirod Das Gupta, transferred.

Asst. Surgn. Syam Nirod Das Gupta, of Puri Dispy., is apptd. an additional Demonstrator of Anatomy in Med. Coll. Hosp., Calcutta.

Asst. Surgn. Suresh Chandra Bhattacharji, House Surgn. in the 2nd Surgn's Ward of the Med. Coll. Hosp., Calcutta, is apptd. as an additional Demonstrator of Anatomy in that institution until further orders.

Asst. Surgn. Upendra Narayan Roy, offg. at Chapra Dispy. in Saran Dist., is confirmed in that appointment.

Babu Kunja Behari Goswami made over charge of Balasore Jail to Dr. J. L. Hendley on 17th July.

Surgn.-Capt. F. C. Clarkson, Supdt. of Krishnagar Jail, made over charge to Asst. Surgn. Behari Lal Pal on 23rd July.

PUNJAB GOVERNMENT.

Dr. D. N. P. Datta made over charge of duties of Supdt. of Hoshiarpur Jail to Asst.-Surgn. Attar Chand on 1st July.

Surgn.-Capt. G. F. W. Braide, Supdt. of Lahore Central Dist. and Female Jail, has obtained priv. leave of absence for three months, from 3rd July.

Asst. Surgn. J. Davis, Civil Surgn. of Gujranwala, is apptd. to act as Supdt. of Lahore Central Dist. and Female Jail, from 3rd July, vice Surgn.-Capt. G. F. W. Braide, proceeded on leave.

Surgn.-Capt. F. B. Dwyer assumed charge of Civil med. charge of Lahore Dist., on 14th of July, relieving Surgn.-Maj. J. Munroe.

Asst. Surgn. Attar Chand held charge of duties of Supdt. of the Hoshiarpur Jail from 13th to 15th May.

Asst. Surgn. Gobind Ram held charge of duties of Supdt. of Mooltan Dist. Jail, from 22nd to 24th June.

Asst. Surgn. J. Davis made over charge of duties of Supdt. of the Gujranwala Jail to Asst. Surgn. Thakur Datt, Raj Bahadur, on 2nd July.

Surgn.-Lieut. H. J. K. Bantock assumed charge of civil med. duties of Rajapur on 7th of July, relieving Surgn.-Lieut. E. C. MacLeod.

Third class Hosp. Asst. Isa Charr, at present attached to Wazirabad-Lyallpur Railway, having passed Eng. Qualification Exam., is entitled to higher rate of pay of his grade from 12th July.

Third class Hosp. Asst. N. Nabil Bakht, at present attached to Sampla Dispy., Rohtak Dist., having passed Eng. Qualification Exam., is entitled to higher rate of pay of his grade from 18th July.

Third class Hosp. Asst. Laboria Ram, at present attached to Sheikh Budin Dispy., Dera Ismail Khan Dist., having passed English Qualification Exam., is entitled to higher rate of pay of his grade from 6th July.

Third class Hosp. Asst. Jowahir Singh, at present doing general duty at Mooltan, having passed the English Qualification Exam., is entitled to higher rate of pay of grade from 6th July.

Third class Hosp. Asst. Ghulam Nabil, doing general duty at Mayo Hosp., Lahore, to Bauzu for general duty from 29th June.

Third class Hosp. Asst. Ata Muhammad, Tibbi Dispy., Montgomery Dist., has obtained one month's priv. leave from afternoon of 2nd July.

The priv. leave for one month granted to 1st class Hosp. Asst. Abdul Rahman in is converted to leave on med. certificate and extended by four months.

Asst. Surgn. Kali Nath Rai, doing general duty at Mayo Hosp., Lahore, has obtained six months' sick leave on med. certificate from 5th July.

Surgn.-Capt. H. J. Dyson, Deputy Sanitary Commr. in Punjab, has been apptd. Sanitary Commr. of Bengal, and will join his new appointment at end of month.

Brig.-Surgn.-Lieut.-Col. Franklin, Surgn. to Viceroy, will officiate in addition to his own duties as Inspector-Genl. of Civil Hosps. in the Punjab, vice Surgn.-Col. Baye, who goes on three months' leave in middle of August.

Third class Hosp. Asst. Bell Ram, at present doing genl. duty at Umballa, having passed English Qualification Exam., is entitled to higher rate of pay of his grade from 24th July.

Second class Hosp. Asst. Hira Singh, doing genl. duty at Rawalpindi, to Travelling Dispy., Ludhiana Dist., when he joined on 23rd July, relieving 2nd class Hosp. Asst. Fasal Karim.

Second class Hosp. Asst. Fasal Karim, on being relieved of charge of Travelling Dispy., Ludhiana Dist., was apptd. to do general duty at Ludhiana on 28th July.

Under Dispy. Rule VI, the Inspt.-Genl. Civil Hosp. Punjab, sanctions establishment of a Dispy. 3rd grade, class A (3) at Dadri in the Rohtak Dist.

Third class Hosp. Asst. Hari Chand, doing genl. duty at Delhi, to Dadri Dispy., Rohtak Dist., which he joined on 28th July.

On expiration of priv. leave granted to 3rd class Hosp. Asst. Mehta Hakim Singh was apptd. to Mariana Dispy., Hoshiarpur Dist., on forenoon of 26th July, vice 2nd class Hosp. Asst. Sube Khan, deceased.

First class Hosp. Asst. Kale Khan, attached to Wazirabad Delimitation Commission, obtained six months' leave on med. certificate from 15th May.

Asst. Surgn. Hira Lal was apptd. to do general duty at Mayo Hosp., Lahore, from 29th June.

Asst. Surgn. Hira Lal, doing general duty at Mayo Hosp., Lahore, is apptd. Junior House Surgn., Mayo Hosp., Lahore, from 2nd July, vice Asst. Surgn. Alla Jeyara.

Third class Hosp. Asst. Sukraj Das, from Serai Sidhu Dispensary, Mooltan District, to Shikhar Civil Hosp., which he joined on 18th May.

Third class Hosp. Asst. Subraj Das from Shikot Civil Hosp. to City Branch Disp. Shikot, from 1st July.

The services of following Hosp. Assts. of Punjab Provincial Establishment were placed temply. at disposal of Milly. Dept. in connection with Chitral Relief Force from dates noted against their names:—

First class Hosp. Asst. Parmansud from Jeium to Rawalpindi, from 26th March.

Third class Hosp. Asst. Ganesh Das, from Umballa to Rawalpindi, from 30th March.

Third class Hosp. Asst. Guran Ditta, from Umballa to Rawalpindi, from 14th April.

Third class Hosp. Asst. Amir Khan, from Karul to Rawalpindi, from 22nd March.

Third class Hosp. Asst. Jawahir Mal, from Midh, Shahpur Dist., to Peshawar, from 30th March.

Third class Hosp. Asst. Ramjas, from adampur, Jullundur Dist., from 21st March.

Third class Hosp. Asst. Bur Singh, from Kalka to Peshawar, from 23rd March.

Second class Hosp. Asst. Hira Singh, from Najafgarh, Delhi Dist. to Peshawar, from 23rd March.

Surgn. Maj. S. F. Bigger assumed charge of civil med. duties of Bannu Dist. on 23rd of July, relieving Surgn.-Capt. H. Fooks.

On return from priv. leave Surgn.-Maj. C. J. Bamber resumed charge of civil med. duties of Rawalpindi on 24th July, relieving Asst. Surgn. Bhagwan Das II.

Second class Hosp. Asst. Daulat Khan, from N.-W. Railway, Amritsar, to Peshawar, from 22nd March.

Third class Hosp. Asst. Akbar, Khan from Delhi Dist. to Peshawar from 8th April.

First class Hosp. Asst. Maha Narain, from Baganwala Colliery, N.-W. Railway, to Rawalpindi, from 10th May.

Consequent on deputation of certain Hosp. Assts. to milly. duty in connection with Chitral Relief Force, the following changes were made:—

First class Hosp. Asst. Agla Ram was recalled from leave and apptd. to Miani Disp. Shahpur Dist. which he joined on 24th March, relieving 2nd class Hosp. Asst. Umar Chand.

Second class Hosp. Asst. Umar Chand was transferred from Miani to Midh Disp. Shahpur Dist. which he joined on 24th March, relieving 3rd class Hosp. Asst. Jowahir Mal.

Asst. Surgn. Har Bhagwan Das, Sanitary Offr., Kalka, assumed charge of Kalka Disp. on 22nd March, relieving 3rd class Hosp. Asst. Bur Singh.

Second class Hosp. Asst. Sheikh Dilwar Ali, doing genl. duty, Delhi, was transferred to Najafgarh Disp., Delhi Dist., which he joined on 22nd March, relieving 2nd class Hosp. Asst. Hira Singh.

First class Hosp. Asst. Kamal-ud-din, Jullundur Civil Hosp., was transferred to Amalpur Disp., Jullundur Dist., which he joined on 20th March, relieving 3rd class Hosp. Asst. Ramjas.

First class Hosp. Asst. Abdul Bahman, Amritsar-Pathankot Section, N. W. Railway, assumed charge of Attari-Philkour Section, N. W. Railway, from 21st March, relieving 2nd class Hosp. Asst. Daulat Khan.

MADRAS GOVERNMENT.

MEDICAL EXAMINATIONS.

The following candidates have passed—

Final Exam. for Hosp. Asst., First Class—Munshi Ram Sharma, S. Bistappah, T. S. Chinnaiah, A. Venkatarama Aiyar, H. Duraiswami Pantulu, V. P. Krishna Menon, M. Varadaiya, Muhammad Ali Kaseel, V. C. Ramaswami Aiyar, V. S. Arunachalam Pillai, V. Murugappa Asari, M. S. Ganesaiah Pillai, R. Rangaswami Aiyar, T. N. Rathnaswami Pillai, S. Narayana Aiyar, N. Subramanyam Nayudu, V. M. Swaminatha Sarma, A. V. Duraiswami Aiyar, P. Isaac William, P. S. Ganesaiah Packias, M. Rajagopal Mudali, K. M. Vyakulaiah Pillai, S. Krishnaswami Mudali, M.

Swaminathan, P. Appava Pillai, Muhammad Hussain, F. Davis, M. V. Chalapathi Rao, K. Venkates Rao, S. Venkateswari Pillai, T. Sankarajulu, P. Thangavelu, Mudali, S. J. Iyer, S. A. Rajakannu Mudali, K. Narayan, Theodoros Gwili, B. Gurava Reddi, M. Lakshminada Rao.

Second Class.—P. M. Pachai Perumal Pillai, K. Kumbhi Sankar, W. M. Thangavelu, J. H. Yamada, Mung Ryan Lyne, O. Manicka Menon, B. Ranga Nayakulu Nayudu, R. Kannaswami Nayudu, P. K. Krishnan, O. Kunji Bahman, G. Sivaraman Pillai, T. J. Govindaswami, Muhammad Ataulah Khan, V. K. Narasimham Chari, M. Padmasambham Pillai, K. Kandaswami Pillai, M. Muhammad Fashuddin, C. V. Shadagopa Mudali, S. S. Thambuswami, N. Subramanyam, T. S. Venkatakrishna Aiyar, T. A. Ramaswami Aiyar, P. L. Daiswamikhamani, A. Chidambaram Mudali, G. T. Edward, C. Parneahatham Nayudu, Muhammad Raisuddin, V. E. Achuthan, M. Loganatham Pillai, A. M. Vaisapuri Mudali, V. C. Subramana Mudali, K. V. S. Krishnaswami Aiyar, A. Singaravelu, C. V. Rajagopal Nayudu, K. I. Vergese, L. A. Arukiaswami Pillai, D. Chabbers, V. Govindarajulu, Ondan Kela, C. Rajarathnam Mudali, P. Anthu Nathan, P. Govinda Pillai, T. D. Swami Mudali, S. Jeendesan, J. Adinarayanaswami Nayudu, V. Krishna Rao, Muhammad Abdul Kudos, D. Muniswami Mudali, M. O. Sundara Sarma, Kunial Raman, Lazar Thambuswami Pillai, Muhammad Khan, M. David Pillai, Mung Shewbo, A. Gopal Rao, B. Vira Bhadrudu.

Primary Exam. for Apothecary, First Class.—G. A. Scully, A. E. Hamlin, F. F. Rath Carreck, Mrs. E. A. Hufiton, A. W. Truter, N. H. Charles, C. J. Bateman.

Second Class.—J. H. L. Westerhout.

Final Exam. for the Apothecary grade, First Class.—Miss N. Ottmann, H. St. Charles Daily, F. P. Viera, F. O. D'Crus, Miss L. Holman.

Second Class.—Miss A. C. Austin.

Exam. for Chemists and Druggists, First Class.—M. Manickam.

The following candidates have passed the Second L.M. and S. Degree Exam. held in July: *First Class*.—Francis Peter, Vleyra, Lawrence Walter, Pereira, Henry St. Charles, Daily. *Second Class*.—K. Thomas Mathew, A. M. Bravym, Andrew Avolino Manuel, Nina Eleanor Ottman, E. A. Veiga, Viraraghava Muttuswami Doss, B. Satyamangalam Kesava Rao, Guanamani Samsou David, S. Sivaramakrishnan, Ooludalur Appalarani Mudali, Palattankal Mathen Mathai, J. Tirusura Manavalaya.

The following is a list of failures in the Second L.M. and S. Degree Exam. held in July:—Surgery and Surgical Anatomy, Ophthalmology, Midwifery and Diseases of Women and Children, Medical Jurisprudence, Operative Surgery, Hygiene, General Pathology.

The following candidates have passed the First L.M. and S. Exam. held in July:—V. P. Subba Aiyar, K. Mathava Menon, T. N. Duraiswami, S. Arunachalam, Edakkunni Rama Wariyar, C. Maria Joseph Sanjivanthan, Richard Jose, V. Trivellore Viraswami Mudali, K. Narasim Jayengar, S. Paramesvaran Pillai, N. Narayana Rao, M. R. Paramesvaran Pillai, Syed Abdus Salam, J. Amritaswami Pillai, Chittoor Kuppuswami Pillai, V. A. Thomas, A. Anthony Moreira, M. Manickam, A. Thomas Thomas.

The following candidates have passed the Preliminary Scientific Exam. held in July:—K. Balasimba Rao, Peter Paul Pinto, C. Bangalore Rama Rao, Pascal Victor Gonsalves, C. V. Nilakanta Aiyar, Maung Ba, Joseph Victor Mascarenhas.

The following candidates have passed the First M.B. and Ch.M. Exam. held in July:—M. Krishnaswami, Lawrence Dudley Parsons, Alfred Spittelen, G. Asirvadam Pillai, Kurien, Eapen.

Surgn.-Capt. Robert Henry Elliot, F.R.C.S. (England), M.S., M.S. (London), to act as Superintendent, Ophthalmic Hosp., Madras, during absence of Surgn.-Maj. T. H. Pope, M.D., on leave, or until further orders, and without prejudice to his present duties as Professor of Biology, Presidency Coll., Madras, until relieved by Mr. A. G. Bourne.

Civil Apothecary V. Venkates, Acting Asst. to Dist. Med. and Sanitary Officer, Kuzhool, granted priv. leave for 15 days.

BOMBAY GOVERNMENT.

The following transfers are sanctioned:—*Asst. Surgs.*
Indian Subordinate Med. Dept. Daniel William Adolphus Gillespie, 2nd class, 1st grade, from Mil. Dept. to Civil Dept. and attached to Civil Hosp., Barisal.

Hosp. Asst. Yeshwant Gaisooji, 3rd class, from genl. duty, Nashik, up to 2nd June, to cholera duty, Malegaon City, from 2nd June, chargeable to Municipal Fund.

Hosp. Asst. Yeshwant Gaisooji, 3rd class, from cholera duty Malegaon City, up to 18th June to genl. duty, Nashik, from 18th June.

Hosp. Asst. V. Appadorai Nalkar, 3rd class, from genl. duty, Sholapur, up to 4th July, to fair duty, Pandharpur (Barsi Road), from 4th July, chargeable to Pandharpur Municipality.

Hosp. Asst. Appadorai Nalkar, 3rd class, from fair duty, Pandharpur (Barsi Road), up to 12th July, chargeable to Pandharpur Municipality, to genl. duty, Sholapur, from 13th July.

Hosp. Asst. Rajaram Shivaram, 3rd class, from genl. duty, Sholapur, up to 4th July, to fair duty, Pandharpur (Mohol), from 4th July, chargeable to Pandharpur Municipality.

Hosp. Asst. Rajaram Shivaram, 3rd class, from fair duty, Pandharpur (Mohol), up to 12th July chargeable to Pandharpur Municipality, to genl. duty, Sholapur, from 13th July.

Hosp. Asst. Kundamul Karamchand, 3rd class, from N.-W. Railway Dispy., Laki, up to 31st May, to N.-W. Railway Hosp. Kotri, from 1st June.

Hosp. Asst. Mulchand Jamatmal, 3rd class from N.-W. Railway Hosp., Kotri, up to 1st June to N.-W. Railway Dispy. Laki, from 1st June.

Hosp. Asst. Mulchand Jamatmal, 3rd class, from N.-W. Railway Dispy., Laki, up to 22nd June to N.-W. Railway Dispy., Ruk, from 28th June.

Hosp. Asst. Akhund Salleh Mahomed, 3rd class, from N.-W. Railway Dispy., Ruk, up to 28th June to N.-W. Railway Dispy., Laki, from 30th June.

The undermentioned are allowed leave:—

The priv. leave therein granted to 2nd class Hosp. Asst. Permanand Vishandas is converted into furlough for one year from 2nd January.

Third class Hosp. Asst. Govind Gungadhar was on fair duty, Shingnapur, Satara Collectorate, from 30th March to 13th April.

Third class Hosp. Asst. Krishnaji Ramchander, was on fair duty, Sangam, Hungund Taluka, Bijapur Collectorate, from 3rd April to 31st May.

Third class Hosp. Asst. Bhimaji Krishna, was on fair duty, Golgeri Sindi Taluka, Bijapur Collectorate, from 2nd April to 20th April.

Against the name of 3rd class Hosp. Asst. Samaldas Nanji, for 4th June read 4th June.

Against the name of 3rd grade Hosp. Asst. Viragoo Dhurmalangam, for 27th July read 24th July.

Asst. Surgn. J. E. Bocarro, L.M.S., has been apptd. Asst. to Med. Offr. Kathiawar Political Agency, and in charge West Hosp. Rajkot, from 7th July *vice* Asst. Surgn. Krachi Shariarji Bharucha, L.M.S., transferred to Poona.

Surgn.-Lieut. D. C. Johnston is apptd. to act as Civil Surgn. Jacobabad, in addition to his own duties from 4th June.

Surgn.-Maj. Danjisha Navroji Parakh, to be Surgn.-Lieut.-Col.

Surgn.-Capt. W. H. Burke, Surgn.-Capt. J. Crimmin, to be Surgn.-Maj.

Surgn.-Lieut. W. C. Sprague to be Surgn.-Capt. Senior Assistant Surgn. and Honorary Surgn.-Lieut. J. Gallagher to be Honorary Surgn.-Capt.

Kalkhoru Sorabji Engineer A. D. Roberts, to be Asst. Surgn., 1st grade.

Shas Gobind, Sorabji Fardunji Ghamlihi, Venkatesh Balvant Karandhar, J. H. Wittenbury, to Asst. Surgn., 2nd grade.

CENTRAL PROVINCES GOVERNMENT.

Surgn.-Maj. C. Henderson, Civil Surgn., returned from priv. leave and resumed executive and med. charge of Hoshangabad Jail from Asst. Surgn. Mrigendra Lal Mitra on 20th instant.

Second class Civil Hosp. Asst. Surji Rao, doing duty under orders of Civil Surgn., Saugor, is directed to do duty under orders of Civil Surgn., Narsingpur.

Second class Civil Hosp. Asst. Partab Singh, doing duty under orders of Civil Surgn., Sambalpur, is apptd. to Jail Hosp., Saugor.

On being relieved by Civil Hosp. Asst. Partab Singh, 3rd class Civil Hosp. Asst. Ramkrishna Lal, temply attached to Jail Hosp., Saugor, is directed to do duty under orders of Civil, Surgn. Saugor.

Priv. leave for fourteen days was granted to 3rd class Civil Hosp. Asst. Nand Kishore, attached to Jail and Police Hosp., Betul, from 1st to 14th July.

N.-W. P. AND OUDH GOVERNMENT.

The undermentioned passed students of Lahore Med. Coll. are apptd. to Civil Med. Dept. of these Provinces as 3rd grade Asst. Surgns. from dates mentioned against their names, and are placed on reserve duty at Lucknow:—Shashi Bhushan Banerji, 10th June; Bishambhar Sahay, 10th July.

The services of undermentioned med. offrs. of Bengal Estab. are placed permanently at disposal of Govt. of N.-W. P. and Oudh from dates on which they may be respectively confirmed in civil employ by that Govt.:—Surgn.-Capt. C. C. Manifold, Surgn.-Maj. G. M. J. Giles, M.B., F.R.C.S., Surgn.-Capt. J. M. Crawford, M.B., C.M.

Surgn.-Capt. L. E. Anderson, A.M.S., to the civil med. charge of Muttra Dist., in addition to his other duties, from 27th June.

Surgn.-Capt. G. H. Fink's, services have been replaced at disposal of Govt. of India.

Surgn.-Capt. C. C. Manifold, at present employed in Rampur State, whose services have been placed permanently at disposal of this Govt. by Govt. of India, Home Dept., to be Civil Surgn., 2nd class, and to be seconded in that class.

Surgn.-Maj. G. M. J. Giles, Offg. Civil Surgn., to be Civil Surgn., 2nd class, with grade station Jhansi, from 8th May 1895, *vice* Surgn.-Maj. Deane, deceased.

Surgn.-Capt. J. M. Crawford, Offg. Civil Surgn., to be Civil Surgn., 2nd class, with grade station Azamgarh, but to continue to offic. as Supdt. Central Prison, Benares.

The services of first class Mil. Asst. Surgn. E. P. Clement are placed at disposal of Govt. of N.-W. P. and Oudh.

Asst. Surgn. Ikhtdaruddin, from charge of Sadr Dispy., Hardoi, to that of Sandila Branch Dispy. in same dist.

Asst. Surgn. Surash Chandra Ghose, from charge of Sandila Branch Dispy. in Hardoi Dist. to that of Sadr Dispy. in that dist.

BURMA GOVERNMENT.

Surgn.-Maj. R. E. S. Davis, M.B., made over, and Surgn.-Lieut.-Col. O. Baker assumed, charge of duties of Junior Civil Surgn. and Superintendent, Lunatic Asylum, Rangoon, on 13th July.

On abolition of Civil Surgeoncy of Shwegyin Dist., Senior Asst. Surgeon Henry Wells relinquished charge of duties on 9th July.

First class Asst. Surgn. John Fisher made over, and Senior Asst. Surgn. Henry Wells assumed, charge of duties of Civil Surgeon, Prome, on 18th July.

First grade Hosp. Asst. Abdul Rashid, on availing himself of priv. leave for one month, relinquished charge at Civil Hosp. Yandoon, Thongwa Dist., on 1st July.

Second grade Hosp. Asst. Ramaya Nagappa, on re-transfer to Mil. duties, relinquished charge at Outpost Hosp. Mingin, Upper Chindwin Dist., on 24th June.

Second grade Hosp. Asst. D. P. DeSouza relinquished charge at Police Hosp., Bhamo, on 18th June, and assumed charge at Civil Dispy., Yandoon, Thongwa Dist., on 1st July.

Third grade Hosp. Asst., Wazir Singh relinquished charge at the Civil Hosp., Kindat, Upper Chindwin Dist., on 30th June, and assumed charge at Outpost Hosp., Paungbyin, Upper Chindwin Dist., on 27th June.

Third grade Hosp. Asst. Mahomed Hussain relinquished charge at Outpost Hosp., Kazi, Myitkyina Dist., on 24th June, and assumed charge at Police Hosp., Myitkyina, on 27th June.

Third grade Hosp. Asst. Shaik Abdool Majid assumed charge at Outpost Hosp., Mingin, Upper Chindwin Dist., on 24th June.

Third grade Hosp. Asst. Poromanand Mohapatra assumed, as an additional duty, charge of Jail Hosp., Kindat, Upper Chindwin Dist., on 10th June, *vice* 2nd grade Hosp. Asst., Abraham Samuel.

Third grade Hosp. Asst. Anantharam Krishna Pillay assumed as an additional duty charge of Police Hosp., Shwebo, on 4th July, *vice* 3rd grade Hosp. Asst., Sletoo Mohan Bose.

Third grade Hosp. Asst. Pyidath Appa assumed charge at Outpost Hosp., Myittha, Kyaikse Dist., on 7th July.

ASSAM GOVERNMENT.

Third grade Hosp. Asst. Chandra Kisor Sen, is med. charge of Jalaguti Disp., in Nowgong Dist., is transferred to Khasi and Jaintia Hills Dist., and is apptd. to med. charge of Shalla Disp. in that Dist. from 8th July.

Third grade Hosp. Asst. Javar Chandra Karmakar, in med. charge of Shalla Disp. in Khasi and Jaintia Hills Dist., is transferred to Nowgong Dist., and is apptd. a superny. under orders of Civil Med. Offr. of that dist., from 19th July.

Sick leave for two months is granted to 3rd grade Hosp. Asst. Binaya Charan Ghosal, in extension of sick leave granted to him in Med. Dept., 4th July.

Masud Nasir Ali, a passed student of Patna Temple School of Medicine, is apptd. on probation for six months a Civil Hosp. Asst. in Assam, and is posted to Sylhet for duty as a superny. from 26th July.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Re. 1 for subscribers and Rs. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

CREE.—On July 26th, at Kasmall, the wife of Surgn.-Capt. H. E. Cree, Army Medical Staff, of a daughter.

CARTER.—At Scarborough, on the 3rd July, the wife of Deputy Surgn.-Gen. H. Vandyke Carter, M.D., Q.M.S., of a daughter.

MARRIAGE.

SEXTON—CONWAY.—At the Roman Catholic Church, Chakrata, on the 31st July, 1895, Michael John Sexton, Surgn.-Capt., M.D., A.M.S., to Catherine (Katie), eldest daughter of Capt. John Conway, the Duke of Cornwall's Light Infantry.

DEATH.

GLADWIN.—At Lucknow, on the 5th August, 1895, Charles Gladwin, son of the late Major Francis Ulric Gladwin, 13th B. N. I., aged 81 years and 9 months. Deeply regretted.

NOTICES TO CORRESPONDENTS.

R. B. (Baluchistan).—Possessed of an Indian degree (M.D., M.B., or L. M. S.) you can obtain the Edinburgh M. B. and C. M. degrees with a year's residence and examination. With the same Indian degrees you can obtain any British Corporation diploma (such as the Surgeons, Physicians and Apothecaries diploma), by simply appearing for the senior examination of these bodies. A complete Indian University curriculum meets every requirement of the Corporations and Universities of Great Britain.

P. A. W. (Bernardino).—No change has been made in the subscription to the *Record* or the Association. The scheme fell through.

L. P. C. (Kohina).—The form of intending members for the Indian Medical Association to fill up, is to be found in each issue of the *Record*, vide advertisements.

S. N. G. (Jalapaahar).—Will you kindly prepare the petition and fill in the regulations and quotations from rules &c., which support your prayer, and we will without further delay arrange to have the memorial sent in. The original papers cannot be found.

P. K. M. (Jagati).—Apply to the Manager for a copy of Saunders' book on Diseases of Children.

U. P. D. (Warda, C. P.).—All information concerning the Association will be found in the *Record*. Fill in the form (written) and send it to this office. See the Business Notices of the *Record* for information regarding subscription, &c.

H. B. (Maulkango).—The index goes out this issue.

H. C. M. (Patna).—You will find all the information you need regarding Indian and British Medical Colleges in the *Medical Register and Directory of the Indian Empire* to be had of the Manager of this office.

F. G. (Darjeeling).—Yes, the appointment ought to result in the officer named being seconded.

L. M. Kadir, C. M. S., of Jalandhar writes to say he has found bandage in small doses frequently, very useful in various menorrhagia.

V. S. B. M. (Charnagiri).—The stationery suggested by the Manager of this Office has been specially got up for members of the Indian Medical Association and for members of the Military Assistant Surgeon service. Each have a neat crest of their own and are light and good, a sheet of paper and envelope being carried by a half anna stamp. The general use of one kind of paper and crest will it is hoped, lead to the formation of a proper *esprit de corps*.

G. E. K. (Bolarum).—The fund you write about will soon be formed; the scheme is under discussion.

J. S. H. (Nowgong).—Saunders' books will be found perfectly suitable to Indian examinations.

A. B. (Southampton).—Your paper is very interesting reading, but is somewhat late in the day. We have sent it to a local paper in the hope that it will be used.

H. D. (Darjeeling).—Saunders' Series on Gynecology will quite suit you.

Other contributors and correspondents will kindly have patience with us. Their papers will appear as early as practicable. Press of work prevents our noticing them in detail.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks: *Journals*.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganja Tibabat—Gaillard's Medical Journal—Calcutta Journal of Medicine—Scaupel—The Practitioner—Medical Missions.

Gazettes of the Governments of India, N. W. P. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers: Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Anrita—Bazar Patrika—The Sentinel—India—Panjab Patria—Indian World—Calcutta University Magazine.

Book.—*Gun-shot Injuries*: their history, characteristic features, complications and general treatment, with statistics concerning them as they have been met with in warfare. By Surgn.-Genl. Sir T. Longmore, C.B., C.S. F.R.C.S. (Publishers, Longmans, Green & Co., London.) Price 31s. 6d.

Literary Contributions and Letters from: Surgn.-Capt. Patrick Hehir, M.D., F.R.S.E., F.R.C.S.E., D.P.H., Hyderabad; D. Morison, M.D., C.M., Rajahmundry; Asst. Surgn. C. A. Nanjale, L.M.S., Chickwaghore; B. H. Nanavaty, L.M.S., Ahmedabad; Jalaratnam Pillai, C.M.S., Mysore; T. M. Shah, L.M.S., Junagadh; Jos. P. Barbosa, M.B., C.M. (Edin.) Mysore; H. D. Pant, L.M.S., Gonda; Babbar Behari Chatterji, L.M.S., Bell; James Harris, L.M.S., Madras; Asst. Surgn. Kameshwar Dey, M.B., Marichpur; M. Rangacharya, M.A., Madras; The Secretaries, Bombay Medical Reform Committee; V. C. Samsanga Muballa, L.M.S., Tanjore; and others.

ORIGINAL ARTICLES.

REMARKS ON THE SALE OF POISONS AND OF QUACKS AND QUACKERY IN INDIA.

By Surgeon-Capt. PATRICK HENRI, M.D., F.R.S.E., F.R.C.S., D.P.H. (Cantab).

Lecturer on Pathology and Clinical Medicine, His Highness the Nizam's Medical School, Hyderabad.

THE absence of definite restrictive measures against the sale of poisons has been felt throughout this country by those having the interest of the people at heart, that we cannot go on *in perpetuo* without legislating upon this very vital question. Recently I drew up a scheme to meet the needs of the Municipal area, of which I am Health Officer, and as there must be many places in India which might to some small extent be benefited by knowing what has been attempted in this place, I submit my views:—

1. It has frequently been my duty to represent the urgent necessity for introducing restrictive measures in regard to the sale of poisons in these dominions, and especially within the limits of this Municipality with which I have special concern, as its Health Officer. In these representations, I have called attention to the appalling danger to the population, and the serious premium on criminal poisoning, arising out of the unhampered and unrestricted sale of lethal drugs. The objection that in "any country where poisonous drugs are habitually consumed by the people in prodigious quantities, it would be difficult to exercise any limitation upon the sale of poisons," is purely theoretical, and one which could readily be met by a qualifying clause in any enactment or resolution of the sale of poisons. It is notorious that in almost all parts of India any person can purchase for a few pice a sufficient quantity of any poisonous drug as arsenic, *koochla* (nux vomica) or strychnine, *dhatura*, &c., to destroy a number of human lives. The results of analyses by Government Chemical Analysts all over the country shew that in a large percentage of the cases arsenic is used as a homicidal poison, as well as in the poisoning of cattle, either from malice to cattle owners, or by chucklers,* for the sake of the hides of the animals so poisoned. Strychnine is occasionally homicidally used, and *dhatura* seed is frequently given in curry, or in confectionery, to intoxicate or hocus people and then rob or kill them.

2. It is reasonable to suppose that a certain amount of poisoning, both homicidal and suicidal, goes on in our Municipality, unless we arrive at the illogical conclusion, that the people of these parts, who live under precisely the same moral, social, and domestic conditions as do those of any other town or city in this large empire, are conspicuous as the only community in India in which this form of crime is not met with. For with the unusual facilities afforded in *seranams*, the privacy of which is so stringently maintained, it would be remarkable indeed were such not the case. I cannot personally state it as a fact, but, reasoning comparatively, it is quite possible that a certain amount of secret poisoning, analogous to

the criminal abortion of which we hear so much, is carried on here as in other parts of India, as the list of deaths by poison is only the list of the fatal cases that are detected.

(3). But here is a cause of death which, from the very surroundings of *serana* life, is peculiarly liable to remain undiscovered, as all the pawns of the murderous and criminal poisoner are naturally based on the endeavour not to be detected. On the other hand, the accidental poisoner, the careless physician who in prescribing a drug writes "drachms" instead of "grains" the negligent dispenser who mistakes strychnine for opium salts or oxalic acid (a mistake which has often been made,) or any other poisonous drug for a harmless one, is at first not aware of the grave error he has made, and neither he nor any one else may ever be enlightened upon this point. Indeed, it may so happen that unless the poison be such a one as to make a decided impression on the mouth or palate, the patient may swallow it quite unconscious of the terrible effects it will surely give rise to, sooner or later, and these effects may then be confounded either with the symptoms of the disease from which he is suffering at the time, or as a complication of that disease. And thus, whether the administration of poison has been accidental or felonious, the eventual circumstances of the case may easily be such that suspicion is not aroused as to the real cause of the illness or death.

4. Nevertheless, with reference to the number of deaths, in which poison is the recognized cause, and probability that other deaths of doubtful causation may be so caused, the Government have wisely deemed it of the greatest significance to fully consider the degree of security assured to the public against the indefinite multiplication of such cases. I have attempted to point out the shortcomings of the existing rules regarding the sale of poisons, and the actual degree of insecurity which threatens the public safety.

5. The facts gathered by me indicate that so long as a person of practically any age, from ten years upwards, has a few annas at his disposal, he may purchase a sufficient quantity of any one of the many poisonous drugs in the market to take away the lives of two or more persons. Indeed, anyone really desiring to poison another and having sufficient discrimination to enable him to make a selection from among the many available, or rather purchasable, poisonous drugs, meets with no difficulty in carrying out his horrible design. He may be refused at one shop, but with the tenacity of purpose which characterizes the homicide, he goes from one shop to another, confident that he will ultimately achieve his object; as a druggist or chemist declining to serve him, he can be accommodated at a bania's shop, where poisonous herbs and drugs of various descriptions are openly dispensed and retailed, often by boys and girls of tender age, without the slightest question as to their eligibility for such employment. In the course of my 15 years' experience in India, I have come across a large number of cases in which suicidal or homicidal poisoning has been either perpetrated or attempted, because of the perilous facility with which poisons may be procured in the bazaars.

6. I believe that the legislative interference with the sale of poisons is merely nominal, or if there be a statutory

* Chucklers.

prohibition, it is inoperative in practice. Whether poisons are required for homicide, suicide or for the production of abortion, the facilities for their procurement are alike; for, though it may be a fact that druggists of the better class are extremely particular and exercise the greatest possible caution as regards the sale of poisonous drugs, yet the lower class of drug dealers, and especially the common shop-keepers of bazaars, seldom have such conscientious scruples—all is grist that comes to their mill—and if they can make a small profit out of the sale of a poison, they do so with the same eagerness as they would sell a pound of rice, sugar, or dhall. Recently I went into a certain general-merchant's shop and found confectionary of various kinds locked up in the same almirah as "chlorodyne," Fowler's solution of arsenic, &c.

7. It is absolutely necessary to impose penal restriction upon those engaged in the sale of poisonous drugs as to the manner in which they keep, dispense, and sell these agents, and all dangerous slovenliness or carelessness in any one of these respects, should be subjected to the most deterrent punishment possible.

8. In this connection I would avail myself of the opportunity of stating that certain definite rules, similar to those laid down in the Pharmacy Act in England, should be prescribed for the keeping, dispensing, and selling of poisons. The consequence of the inoperativeness of the legislation on these points is that the public remain without due protection against accidents. My own experience leads me to think that stringent legislation is urgently needed, and it is also a matter of general experience that any disaster occurring as a result of the preparation of prescriptions containing poison, any error such as that of mistaking lethal drugs for harmless compounds would probably at the present time be considered a misadventure, and, as such, passed over unnoticed, instead of the law holding some one responsible for such a grave mistake.

9. A qualified Inspector should be engaged to enforce the law in its full integrity by periodically, and from time to time, as special occasion may require, inspecting all shops borne upon the Register, to see that they faithfully and implicitly carry out the terms of these rules, and in case of any non-fulfilment or breach of them, to have the power of suspending the license until such time as the cause of cancellation has been inquired into and, then if the vendor is at fault, to entirely remove his license.

10. People, even Europeans, appear to have no difficulty in obtaining poisons. I take one drug, chloroform, as an example, as it has fallen to my lot during the past two years, to find four ladies with chloroform in their possession—they used to use it for neuralgic headaches and other affections, and when questioned as to whence they procured it, two of them said they "got it from the chemists." One declined to say whence she procured it, and the fourth got it from a medical man.

11. Again, as regards the ordinary business of the retail druggist in dispensing and vending medicines, we know that frequently entirely unskilled and heedless persons are engaged in this work, and we are only too familiar with the mischief resulting from the incompetence or slovenliness of such persons, a large number

of whom, though wholly unacquainted with the properties of powerful drugs and medicines, are allowed to retail them to the public without any check or control. We know to our regret that *banias* or bazaar shop-keepers expose for sale such poisons as arsenic, strychnine, *rashtaphoor* (a mixture of impure chloride and bichloride of mercury), &c., and that either from carelessness in placing the boxes, packets or bottles containing these medicines too near each other, or from ignorance they supply a poison as an innocent drug, and thus either injure health or destroy life. Instances have occurred in which arsenic, for example, has been given in mistake for bismuth, magnesia, or calomel, and some of these lamentable accidents have been the natural results of incompetence and gross ignorance on the part of those who are allowed to retail drugs to the public, and the danger is increased a hundred-fold by reason of the carelessness displayed in keeping in close proximity to each other on shelves, drawers or trays, innocent medicines and poisons resembling each other.

12. But the greatest dimensions of these particular dangers—dimensions in fact which are almost incredible—are reached in the case of the shops of bazaar *banias* where groceries and drugs and poisons are all sold, and where perhaps even foods and poisons are not kept well-asunder. From shops of this description, arrowroot, rice, sago, or something else in common demand may reach its purchaser with a fatal admixture of arsenic. I have seen calomel and arsenic in different papers in the same tray, and all under the care of an ignorant youth. And beyond the limits of the petty village shop-keeper, the careless custody of poisons leads sometimes to their being sold for other matters, and used, even on a larger scale, accordingly.

13. The unrestrictedness with which at present the retail trade in drugs and poisons is conducted, confers—in a curious way, and to an extent which could scarcely have been foreseen—irresponsibility even for mischievous acts. Apparently, the view that the legislature has taken of the matter has been, that the trade might safely be left unshackled by special regulations, and open without special license to all who choose to undertake its practice; on the erroneous assumption that the common law would suffice to protect the public by punishing any druggist, who through his own incompetence or carelessness, or the employment of an incompetent or careless agent, causes harm to any person. But the view taken by the administrators of the law differs from that intended by the legislature, and the absence of special enactment on the subject seems in most instances to be accepted as a ground for concluding that as the law stands—however extreme they may be in degree, or fatal in result—a druggist's carelessness and malpractices are not criminal offences.

14. In nearly all inquests or trials for manslaughter, proof of negligence merely is not sufficient to convict the wrong-doer unless it amount to gross or culpable negligence, but *what* gross or culpable negligence is, has not as yet been clearly defined by law. We learn from the verdicts of juries that the keeping of poisons and medicines similar in appearance close to each other in the same place

is not gross or culpable negligence. So the selling of strychnine for nitre or opium salts, and the indiscriminate keeping of these substances unlabelled in contiguous drawers or packets, until the time of sale, and then labelling the poisonous as harmless medicines, do not legally constitute culpable negligence. The employment of youths whose experience in drugs is so small that they cannot distinguish white arsenic from calomel, or magnesia merely furnishes, by the destruction of life, illustrations of avoidable accident or misadventure, according to law, but not gross negligence on the part of the employer. Evidently the present state of the law signifies that the right-doing druggist shall be free from interference, but that the wrong-doing druggist shall be almost secure from punishment.

15. To carry out the rules detailed below in their integrity, it is absolutely necessary that there should be prescribed an examination as to the efficiency of all those who intend to make the sale of drugs their profession. As it is a desideratum in the practice of pharmacy, that this skilled commerce, in which the greatest care and a certain minimum amount of technical knowledge is necessary, should only be open to those persons whose qualifications for safely practising it have been tested by proper examination.

16. These rules regarding the sale of poisons should be worked under the sanction and strict supervision of the Registrars and the Police Department.

17. Whilst dealing with the subject of the sale of poisons, it may not be inopportune to make a few remarks upon the sale of quack remedies.

18. I was most alarmingly struck with the amount of patent medicines consumed by my *clientele* when I first came here; but I am proud to be able to say that, by consistently discountenancing their employment, I have succeeded in stopping this baneful habit to such an extent, that I can now positively assert that not one of the patients on my list uses such drugs, except we include "Cockle's Pills," "Chlorodyne," and "Jayne's expectorant." The habit is still very widespread, and I regret to have to write that some medical practitioners (*sic*) are largely responsible for fostering the sales of such remedies, while the credulous public either place themselves in the dilemma of bearing testimony either to the possibility of a miracle being wrought by some special panacea, or are the victims of imposture. The consumers of nostrums, that the vendors declare to be capable of curing practically all the ailments of the *nomenclature of diseases*, frequently find that their faith has been misplaced. A single composition, in the form of pills, or "drops" or "syrup," is lauded as the panacea for a great variety of dissimilar diseases, in all their stages. Many of these drugs are either inert, or of very little power, and the most that can be said of practically the whole of them is, that they are not very injurious. But this is not always so, for some of them are very "patent and potent for evil." I have heard of certain local practitioners actually ordering drugs of this kind, and, as if to complete their disloyalty to the practice of rational and scientific medicine, I have heard of their removing certain patent drugs from their original wrappers, bottles and boxes, and dispensing these drugs as if they were of their

own prescription. It is difficult to conceive a more abandoned state of a medical practitioner's mind and habits than that this discloses, or one in which he could display such absolute disregard of the dignity of his calling. It is astounding that any physician possessing, the enlightenment and intelligence the public give him credit for, should not discern in this habit a self-condemnation and an unparalleled short-sightedness. Scientific medicine has enemies enough everywhere to contend with without having to defend itself against such folly as this, perpetrated by its own followers. Surely this section of medical practitioners can find a sufficiently long category of drugs in our recent Pharmacopœia,—a book drawn up by the greatest pharmacologists and therapeutists of the day,—without resorting to the use of quack medicines which is a highly immoral practice, even when adopted by the laity, in so far that whilst rigidly enforcing—solely in the interest of the community—the prolonged scientific and costly education of the legitimate practitioner, the public at the same time accords its approval of the illegitimate and ignorant pretender and charlatan by supporting the sale of their wares not simply to the detriment of the medical profession, but to the injury also of the health of the community.

19. By no class, however, is so great an impetus given to the sale of, and faith in, empirical nostrums, as by the lower class of pharmacutists or chemists and druggists, whose confidential and important business connections with the medical faculty are such that in the true interests of the public, irrespective of their own or those of the profession, they ought, when consulted by a too credulous public to decry, rather than to commend, the use of such agents, and on public grounds alone it would be more than well, were there a general consensus and determination on the part of the faculty to discountenance all chemists who trade in nostrums and traffic in illegal or counter-practice; but imitation is a form of flattery—too often do we meet with local practitioners who deem it a venial error in ethics to prescribe, or even recommend to their patients and friends the use of a quack medicine or secret compound, heedless of the fact that their toleration implies sanction of a recourse to unknown, doubtful, and conjectural fashions of medication.

20. By a curious omission in the legislature and penal enactments, the laws, so stringent for the repression and punishment of fraud, in general, and the adulteration of food and drugs, are altogether silent or inoperative, in regard to the pernicious frauds so notoriously carried on by the host of ignorant and extortionate quacks that infest these parts.

21. The newspaper press, so powerful in the correction of many crying abuses, is unfortunately too ready, for the sake of lucre, to aid and abet the enormities of quackery by the publication of advertisements that are often of the most offensive and most objectionable kind. Honorable exceptions to the once general practice in this respect are, happily, becoming more numerous and, doubtless, would be greatly increased, if medical men individually and collectively were to direct the special attention of the editors and reporters of newspapers, and of periodicals in general, to the immoral tendency and

contaminating effect produced upon the youth and purity of all civilised countries by the disgusting quack pamphlets which are advertised and distributed far and wide through the medium of the press. As the Medical Officer of a large residential college, which educates over a hundred boys and young men from 12 to 20 years of age, I have had opportunities of learning the various ways in which the proprietors of remedies for "secret diseases" reach, or get at, their unfortunate and guileless victims, and I know of nothing more immoral or more nauseating than the machinations by which they entrap the unwary.

22. To those who, like medical practitioners, are in a position to see and judge of the extent of the evil, it is lamentable to find members of the other learned professions so prone to give their countenance, and at times direct patronage, to medical empirics, both by the use of and written testimony in favor of nostrums; but, above all, it is grievous to see the immoral and unjust support rendered to quackery by people of the highest intelligence and the most refined culture. Medical practitioners deserving of the name, as conservators of the public health, are bound to bear emphatic testimony against quackery in all its forms, whether it appears with its usual affrontery, or masks itself under the plausible garb of philanthropy, or the ostensible cloak of religion.

23. The terrible disasters that must necessarily arise, by placing the lives of people in the hands of some of the low-class self-styled medical practitioners, who are, in reality, nothing but ignorant impostors, can scarcely be exaggerated, and would be difficult to limit or describe in writing. I have in previous writings stated that of serious cases of illness, scarcely 1 in 10 are properly diagnosed by certain local practitioners, and this amongst the better classes of patients. What then must be the condition of things among the poorer classes? These practitioners are really quacks in more senses than one, for they go about dosing people with "syrups," and "pain killer," etc., etc., and, in so doing, frequently use their charlatan remedies as if of their own make; this latter fact alone being sufficient to eternally stamp them as dishonest pretenders.

24. The class of men known as Dressers or Hospital Assistants in Government employ—a very useful section of the Medical Department, whose place were they not in existence it would be difficult to adequately fill as they all, locally, get the same medical education as hakims and general practitioners, while some of them are undoubtedly men of high professional attainments, it is natural and legitimate that encouragement be given by promoting the most deserving of them to the rank of hakim, but to permit such men in a half-educated condition to be disseminated broadcast and allowed to run riot as medical practitioners, is a circumstance that cannot be denounced in terms sufficiently emphatic.

25. The remedy for the wholesale charlatanism, now in existence, consists in the promulgation of a peremptory order or injunction, prohibiting all medical practitioners, male or female, midwives and *dhais*, from practising their calling except by a special license, in addition to that license, to do so, obtained from their University College Hospital, or Medical School; this would give the coup de grace to the wholesale imposition to which the public is now subjected.

26. The chief cause of the tardy advance of European medicine in certain parts of India is that it is practised by so many varied grades of practitioners, the professional attainments of the lowest of whom being perhaps at a lower standard than they are amongst practitioners in any other part of the Indian empire. From the classes of men we sometimes see in private practice, it would appear that any person, who has ever been inside a dispensary for a week, considers himself eligible to take up the responsibilities of a private practitioner, to administer to the sick, to relieve the suffering, and take charge of the lives of the ailing part of the community.

27. The man who has served as an apprentice or a compounder on probation in a chemist's shop, or in one of the Government dispensaries for a few months, may be seen, a few weeks, or months, later, driving about in a carriage with his stethoscope and thermometer, pocket case and hypodermic syringe, medicine chest (often filled with the choicest quack panacea), and midwifery bag. From this class of men we pass to the fully developed compounder; and next in order of merit to the student of the Dresser or Hospital-Assistant class, who has failed to pass the first or second year's examination in Anatomy, Physiology, &c., or men of the L.M.S. or Hakim class, similarly circumstanced; or to those students of one or other of these classes who have been reverted to their studies for a year, or actually "failed" altogether in the final examination, or even the dismissed dresser, who is now practising as a physician and is styled by his clients as "Doctor Sahib." We are familiar with many instances of men of these grades who, practising in certain parts of India at the present time, may be seen driving about the whole day and making a few thousand pounds a year, whilst fully qualified, earnest and conscientious practitioners are starving, or are barely able to keep body and soul together.

Indeed we know of men holding excellent appointments, and practising as physicians, who have never had a single day's medical education.

28. The second great cause of the retardation of European medicine in some parts of India is the patronage accorded to the Unani and the Vedic systems; which in curative efficacy, or in knowledge of the nature of disease, is absolutely devoid of even the most remote comparison with modern medical practice. I have, however, sufficiently animadverted on this subject in a previous article.

BURMESE "KWE-NA."

By ASST. SURGN. ARTHUR H. NOLAN, I.M.S.

Civil Surgeon, Moulmya.

BEFORE giving an account of my observations and conclusions on the skin disease known as "Kwe-na" among Upper Burmans, which I believe I have correctly diagnosed as Yaws, I shall record notes of a case I had under treatment at Gangaw in the Pakokku District, shortly after my arrival in Burma in 1889. I had never before heard or read of Burmese "Kwe-na," nor had I during my service in India seen or heard of Yaws there, and the possibility of Yaws existing in Burma did not at the time occur to me. I considered this case either an exceptional manifestation of one of the syphilitic, or a form of "Oriental sore," as the eruption appeared to correspond in

cases respects to the description and representations of Bickers and Grote "Boutons" by Dr. VANDYKE CARTER.

The peculiarities of the case however led me to record the following notes in my diary :—

Gangaw, 17th October 1889.

"A Burman, aged 40 years, from Kale, has on the forehead a cone-shaped fungoid growth covered with a dirty yellowish moist scab. At some little distance it looks not unlike a rupoid excrescence. Base of growth about 1½ inch in diameter, length from base to apex nearly 1". Little pain on pressure over growth, or on removing a portion of the scab, which gives the excrescence a strawberry appearance.

"Skin immediately surrounding base is slightly darkened but not inflamed nor tender; nor, on the contrary, is there want of tactile sensation.

"There is also an eruption of tubercles varying in size from a pea to a medium strawberry and generally round in shape. These are indiscriminately scattered over face, neck, trunk and extremities, but are more abundant on parts where the skin is moist and thin, as the flexor aspect of thighs and arms, neck, pudenda and lips. Some of these tubercles or *boutons* are hard and entirely painless, but most of them are moist from a scanty purulent exudation and scabbed. The moist ones only feel a little tender and the skin surrounding them is slightly reddened. Scabs generally are of a dirty grey or yellow color, some are light brown from oozing of blood. They appear to possess the same anatomical characters as the large growth.

"The man is strong looking and well nourished. No history of syphilis, glands unaffected, no fever, complaints of some pain in joints which are not swollen nor tender. Calls the disease "Quayna," says it is contagious, and he is not allowed by the people to live in his village, nor is he allowed to take up his abode in other villages. No one else in his village is affected with it.

"He contracted it in the Chindwin District, where people occasionally get it. It is not common."

The man was isolated in a small hut, a short distance from my hospital, which he attended daily for over a month. The greater number of the excrescences gradually contracted and fell off, leaving the skin smooth and unimpaired, but marked by spots slightly darker than the surrounding skin.

The large excrescence and a few small ones had not quite disappeared when he left off attending hospital. Treatment was commenced with a purgative and a bath, during which the application of carbolic soap was not spared.

A two-grain dose of quinine was given every morning and ten grains of iodide of potassium with decoction cinchona twice a day. Carbolic oil, 1 in 40, was applied to the eruption.

Later, 2 drachms of liq. hyd. perchlor. were added to each dose of the pot. iodide and the application of dilute citrine ointment substituted for carbolic oil. He was nearly six weeks under treatment.

2. I neither saw a case or heard again of Kwe-na until, in December 1892, I received a communication from Mr. B. C. STREVENSON, Deputy Commissioner of the Yeu District,

regarding the prevalence of the disease in one of the villages of the district named Htanbinzeit.

I quote the following passages from Mr. STREVENSON's letter :—

"Having been aware for some time past that there was a village near Yushay called Htanbinzeit, the residents of which were looked upon as social outcasts by reason of their community being affected with a serious skin disease said to be, by my informants, a kind of leprosy I visited it the day before yesterday morning. ° ° ° The disease is called Kwe-na by the Burmans.

"It is said to be highly contagious, but more especially at one particular time of the year, viz., the month of Wagaung (answering to the latter end of July and first of August) when the sprouts of a kind of bamboo known as 'mhyinwa' begin to shoot.

"Contagion seems to depend on close personal contact, such as eating together out of the same dish, &c. ° ° ° It first commences by the appearance of a sore, which apparently scabs over very soon, but is followed by an eruption which in time covers the whole body.

"The first symptom is great aching of the muscles.

"Persons who suffer from it usually become very attenuated, and this of course is especially the case with those who succumb, ° ° °

"I believe the disease is a very rare one. I have never heard of it before; the Burmans have a great dread of it, and if the villagers of Htanbinzeit were a colony of Thanatophidia, they could not be regarded with greater repugnance by their fellow-creatures.

"I am informed that some years ago, there was a village in the Piginwala portion of the Katha District in which the villagers suffered from the same disease.

"In their case, however, it appears to have been of a more virulent type, attacking the joints and preventing the use of the limbs. ° ° °

3. My temporary transfer from the District soon after receipt of the preceding communication from Mr. STREVENSON, and other duties prevented my visiting, until September 1893, the village of Htanbinzeit mentioned by him, and such other villages where, owing to enquiries previously made, I had heard of Kwe-na.

Notes on some of the cases I examined during that tour, as also a few of the number I have since seen, are given in the appendix to this paper. In parts where the disease is endemic the Burmans and their "Sei-Sayahs" (medicine men) regard it as a form of leprosy.

Following are the results of my observation and enquiries :—

Characters and symptoms of the typical disease.—I am of opinion that in few cases, comparatively, does the disease arise *de novo*, but that it is contracted principally by accidental inoculation, through an ordinary scab, ulcer, or wound, with the virus from a previous case.

The inoculated wound inflames and becomes an unhealthy ulcer, the diameter of which may be ½ to 2 or 3 inches. It is circular or oval in shape and covered with a brownish scab.

It is usually shallow, except in the centre, where it dips. The purulent discharge is scanty and ichorous. The infected sore is called the "Ana-ama-gyee,"

pronounced "Uana-ma-jee," which means chief or primary sore.

After an incubative period of two to eight weeks or more, an eruption, (which may appear on every part of the body except on the scalp which is covered by hair) is observed gradually developing with barely any pain into fungoid growths of various sizes.

When the general eruption appears, the infected sore or "Uana-ma-gyee" usually heals.

The constitutional symptoms vary according to the physique of the individual, state of general health, and the severity or otherwise of the attack.

They are usually, in ordinary cases, loss of appetite, slight depression, pain in limbs, and sometimes fever and anemia.

The tubercles arise from small flat red patches on the skin, often resembling the spots seen on tender skin after flea-bites.

These spots vary in size from a pin's head to a lentil, become papular, are at times itchy, but scarcely painful, even when the papules are broken through into segments, and small yellow points are seen emerging which develop into "kwe-na" tubercles of various sizes.

The eruption may be described as moist, button-like tubercles, resembling granulation tissue capped with dirty grey or yellow scabs formed of the scanty, thin, purulent exudation from them. When a scab is removed another soon forms from the discharge. If blood exudes, as it sometimes does when a tubercle is scratched, picked at, or otherwise injured, the color is imparted to the scab giving it a reddish or dark tinge.

The excrecences are usually round or oval in shape, some well raised, others flattened, and of sizes varying from that of a pea to a size which covers a patch of skin one inch or more in diameter, but the typical eruption in its early stage is about double the size of a well developed small-pox pustule.

At times, after attaining the size of a pea or a little larger, the development of some of the growths ceases, and they dry into hard insensible tubercles and fall off. Others fully develop, then shrivel, contract and fall off, leaving the skin smooth and uninjured. Others, again, spread and flatten, and the scab becomes moister and thinner, exposing the surface of the excrecence, which may break down and ulcerate, or a high crust may form and ulceration go on under it.

In some cases a large single distinct excrecence appears, about one inch or more in diameter at its base, protruding more or less out of the skin and firm. It looks not unlike a roughly cone-shaped lump of putty stuck into the broken skin. Neglect causes it to ulcerate badly.

It will sometimes precede the ordinary general eruption or appear with it; often it is not seen at all.

The eruption is practically painless, unless ulceration occurs.

The margins of skin immediately surrounding the tubercles are (in the ordinary eruption) dark-red or brown, and the tubercles appear set into the skin.

The skin however is not at all sensitive or painful, nor, on the other hand, is there any loss of tactile sensation.

4. *Further*.—The skin affections just described may appear in the disease as multiform.

The Burmese divide them into five forms, each of which I have seen and shall briefly describe:—

1st.—"Kwe-pouk-pouk" (sprouting "Kwe").—This is the typical eruption already described and is the most common.

2nd.—"Kwe-poo-sou"^{*} (elevated ringworm "Kwe").

—The eruption has the same general characters as the preceding, but before breaking through the skin it causes more irritation and some surrounding induration and tenderness.

As it progresses, the tubercles become somewhat irregular in shape, and larger and flatter than the typical eruption. The scab or crust, which is yellow or brown in color, may become thickened, scaly and fissured. When the scab is stripped off an excrecence resembles a large soft bleeding wart, unless ulceration has broken it down.

The central portions of large-sized patches may heal, leaving the skin healthy, with a border of flattened excrecences, thus somewhat representing ring-worm.

This form may appear on any portion of the body, but particularly on soft moist parts, and round the lips and anus. It is clearly as common as the first form and may appear with it.

3rd.—"Kwe-kyet-kyi"[†] (fowls' excrement "Kwe")—from a supposed resemblance to fowls' excrement.—These are very small cone-shaped tubercles, hard and painless. They develop from minute pink patches and have tough grey scabs.

The surrounding skin is unaffected: attacks usually buttocks, extensor aspect of arms, legs and joints, but may appear on any part of the body and with other forms. Is uncommon.

4th.—"Kwe-ta-phun"[‡] (from its supposed resemblance to a broken fig.)—A circumscribed indurated conical swelling at times very painful, is first noticed under the skin which is somewhat inflamed. The skin is eventually broken through, and an ichorous scanty exudation forms a yellow or brown elevated crust over the sore. Removal of the crust exposes a red fungous sore of an irregular circular shape. It may break down and become hollow and cup-shaped with fungoid margins and a tenacious slough in the centre. Appears chiefly on back, thighs and feet.

If it attacks the soles of the feet, the thickness of the epidermis, preventing the growth breaking through for some time, gives rise to a good deal of pain. Not usually multiple. May appear with the other forms.

5th.—"Kwe-bon." (hidden and undeveloped "Kwe").—In this form the Kwe-na eruption does not appear or properly develop. The joints, particularly those of the wrists, ankles, and fingers, become painful and swell. Nodes form, chiefly on the radii, ulnae and tibiae. After some time, if not treated, ulcers (not particularly sensitive) having brown crusts, break out over the joints and shafts of the bones.

* Pronounced Kwey-poo-sou. From "Poo" stagnation and "sou" and irritation or excrecence.

† Pronounced "Kwey-kyet-kyi."

‡ From "Ta-phun-ta" the fig fruit.

The discharges from these spread, cause other ulcerations, and the patient gradually goes down in general health, becoming cachectic and emaciated. If the disease still advances, the ulcers spread and run into each other. Some patches heal while others become deep, filled with slough and are formidable and obstinate. The joints become contracted and ankylosed, the radii, ulnæ and tibiae may become thickened, elongated, and curved^o—from osteo-plastic osteitis probably—nodes break down, and the bones here and there (including at times the nasal and palate) become carious, the hands and feet lose sensibility, and the unfortunate sufferer, after lingering for a few years or more in this condition, dies from exhaustion, if not cut off by some other disease.

6th.—Besides the five preceding varieties I have seen another accompanying the typical form. The Burmese have no special name for it, but call it one of the varieties of "Kwe-na."

The eruption consists of small prominent vesicles clustered together in patches. The patches sometimes coalesce. In a mild case they dry up and heal without ulceration, but in favorable cases they become squamous and fissured and run on to extensive ulceration resulting in contraction of joints, bone disease, &c.

5. *Seat of "Kwe-na" eruption and ulceration.*—As mentioned under "characters and symptoms" and "varieties."

6. *Appearance of skin on termination of eruption.*—Where tubercles contract and disappear without ulceration the texture of the skin usually remains smooth and uninjured. The maculæ are generally dark colored. In cases marked by ulceration the cicatrices present the appearance common to ulcerative processes which have extended to the deep layers of the cutis and connective tissue.

7. *Prognosis of disease.*—Favorable—as far as I can at present judge—if properly treated before the general health becomes badly affected and the ulceration extensive. The disease varies much in severity, from a small crop of tubercles to rhagades and fissures of the skin with extensive foul ulcerations, disease of bone, &c., which render the unfortunate victims helpless cripples until, worn out by pain and discharge, exhaustion brings death.

8. *Duration.*—The usual duration of the ordinary eruption is said to be from six weeks to six months, but it may last for years, with periods of quiescence.

9. *Constitutional Symptoms.*—Pain more or less in limbs, nervous depression and at times feverishness occurs during the commencement of the disease.

If a good crop of the eruption appears, these symptoms abate or pass off. Men and women work, and children play as usual.

When however the disease does not develop in its early stages, or has existed for some time, the patient becomes anæmic, lean, and debilitated, and liable to febrile or other climatic diseases.

10. *Contagiousness.*—It is communicated chiefly by contact and accidental inoculation. An ordinary wound, abrasion, or any affection of the skin where the cutis is broken

or abraded, renders a person liable to the disease, if living in the same house or coming frequently in contact with the infected. The virus of the disease may be conveyed from an affected person to others by mosquitoes, fleas, &c.

People infected in a village are to a certain extent isolated.

11. *Heredity.*—It is not hereditary.

12. One attack does not apparently secure immunity from a second or more.

13. The disease attacks both sexes alike, and people of all ages.

14. *Relation to Syphilis or Leprosy.*—In my opinion none whatever. I have, however, seen two cases in which the manifestations of syphilis appeared to co-exist with "Kwe-na," and believed the individuals to be infected with the virus of each disease.

15. *Treatment.*—In treatment by the "Sei-Sayahs" (native medical practitioners) crude mercury, or the red sulphuret, are the active ingredients in their prescriptions. With the mercury, they generally combine nutmeg, cloves, sesamum, cassia pulp, betel nut,* betel leaf, catechu, pyrothra root and palm-leaf, in powder, as adjuvants and correctives.

In some cases the medicines are administered by mouth, but more often by inhalation. The epidermic method, too, with mercury and fat, is sometimes employed.

The "Sayahs" say that unless the disease is treated with mercury, it gradually progresses with periods of dormancy and death is inevitable.

The process of treatment by mercury—inhalation particularly—is sometimes carried out to the extent of causing most painful and destructive results from extreme salivation.

I have seen cases where necrosis of the palate and nasal bones had occurred from the excessive administration of mercury.

I should think that a few die, while others are left physically wrecked and miserable for life after such disastrously heroic measures.

I can say very little from personal knowledge as regards suitable treatment, having had but few opportunities of seeing the final results of my treatment in a small number of cases of the typical eruption, and in the ringworm variety.

I have used iodide of potassium only in some cases; in others the potassium iodide combined with perchloride of mercury, and latterly, arsenic.

Locally carbolized vaseline, nitrate of mercury ointment and touching the excrescences with sulphate of copper.

In three cases treated with perchloride of mercury and iodide, with the local application of cupri sulph. the tubercles disappeared, but I do not think the disease was cured. In three more cases the same internal treatment caused an increase of tubercles. Arsenic was then tried with benefit.

In one case a few doses only of 5 grains of pot. iodide with ½ grain of hyd. perchlorid. caused severe iodism. Arsenic was then given with benefit.

* It is from this condition the disease derives its name of "Kwe-na." Some, "Kwe," curved bent, and "Na" or "Na" disease, sore.

Disease in which the bones become affected and nodes form, I should treat with iodide of potassium, application of iodine, &c., as for similar conditions in syphilis.

To ulcers, I would apply iodoform or carbolyzed dressings.

Personal cleanliness, suitable diet and good hygienic surroundings would do much towards cure.

In the "Kwe-bon" variety, where joints swell and nodes appear, the native practitioners apply blisters over them, and administer mercury.

16. *General Remarks and Conclusions.*—We have here a disease which, if not yaws (Framboesia) bears a very close resemblance to that peculiar skin affection in its characters, constitutional effects, nature, contagiousness, forms, terminations, and even in treatment by the natives, in so far that mercury is the active ingredient.

I recognise the identity of—

(a) "Kwe-pouk-pouk" with the characters of the ordinary yaw eruption;

(b) "Kwe-pwe-zon" with ringworm yaws;

(c) "Kwe-ta-phon" (and the large cone-shaped excrescence which appears occasionally) with the English "mother yaw" or "Mammian-pian" of French *patois*;

(d) The tough skin covered "Kwe-ta-phon" of the feet, with the "Tubboe" or crab yaw;

(e) "Kwe-bon" and its effects, with those sometimes resulting from undeveloped yaws;

(f) "The vesicular variety," with the form of yaws called "Pian pratelle"; and

(g) The deep ulcerative and destructive phase of the disease with the neglected large intractable ulcers in yaws which cause similar damage and sometimes death.

I would also mention that I consider "Kwe-na" quite as identical in its characters &c., to yaws, as the "Parangi" disease of Ceylon, the "Pian" of Java, "Coko" of Fiji, and the "Verrugas" of Peru, which are now recognised as yaws.

It will, I think, be difficult to trace the origin of "Kwena" in this country. Old Upper Burmans on the Yeu District say it has always existed in parts of Upper Burma. Some Lower Burmans aver they have not seen or heard of the disease in Lower Burma, and Mr. ROBERT C. STEVENSON, who has spent over twenty years in Burma, and has an exceptional knowledge of the country and customs, habits and language of its people, informs me that he had never heard of "Kwe-na" before learning of its existence in the Htanbinzeit village. It may be an endemic indigenous cachexia, consequent on vitiated nutrition from bad hygienic surroundings, exposure and potent malarial influences, and its spread caused by contact and accidental inoculation; or, if its origin by importation be presumed, it must have occurred so long ago that the hope of gaining any definite information on this point from enquiry is very problematical. I see no reference to it in any of the latest works on skin diseases, nor do I remember, ever, seeing it mentioned in medical periodicals. The Burmese are a conservative and reticent people as regards disease and suffering among themselves, particularly if the disease be of a contagious or infectious nature, and I think very few, if any, have sought treatment for "Kwe-na" in any of the dispensaries in districts, where, as far as I at present know, the disease is endemic during the early rains. These are the districts—Yau, Shwabo, Katha, Upper and Lower Chindwin.

DISINFECTANTS; THEIR ACTION AND USES.

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(Continued from page 86, Vol. VIII.)

CHAPTER XIV.

ALUM AND POTASH GROUP.

ALUMINIUM CHLORIDE; ALUM'S; AMMONIA ALUM;
BICHROMATE OF POTASH; CHLORALUM; CHROME
ALUM; CUPRALUM; CONDY'S FLUID; IRON
ALUM; PERMANGANATES OF POTASH
AND SODA; POTASH ALUM; THEIR
ACTION, CONSTITUTION
AND USES.

ALUMS.

(482). The alums are the representatives of a numerous class of double salts composed of a sulphate of one of the alkalies combined with the normal sulphate of a sesquioxide and 24 molecules of water of crystallization. Most of these alums are useful for precipitating the impurities in stagnant pools or liquid sewage (with the after addition of milk, or cream, of lime) and thus preventing air pollution. A short description of the principal alums is herewith given.

(483). AMMONIA ALUM $[(NH_4)_2Al_2(SO_4)_4 \cdot 24Aq]$ is obtained (by substituting Ammonium sulphate for potassium chloride when making alum) as octahedra having the same appearance as Potash Alum for which it is sometimes sold (usually being cheaper) as it is capable of equally well performing its, (the potash alum's) duties in the various arts.

(484). When strongly heated all the constituents of ammonia alum, except the alumina (Al_2O_3) disappear and so great is the absorption and disappearance of heat during this evaporation of the ammonia and water that this alum is frequently used for packing the inter-space of the double walls (shells) of fire-proof safes so that should the outer shell become red-hot the inside of the safe will remain below the scorching point of paper.

(485). CHROME ALUM $[K_2Cr_2(SO_4)_4 \cdot 24Aq]$ is readily obtained by the reaction $K_2Cr_2O_7 + H_2SO_4 + 3(SO_3) + Aq = K_2Cr_2(SO_4)_4 + H_2O + Aq$, as dark purple-violet (almost black) octahedra which show a ruby tint; when subjected to transmitted light. If a solution of chrome alum in water be boiled the violet color is rapidly changed to green and crystals refuse to be deposited; but if this green solution be exposed to cold, for several weeks, it will be re-converted into the violet solution from which the alum may be crystallized out.

(486). IRON ALUM, or *Fer-Alum* or *Ferro-Alumen* $[K_2Fe_2(SO_4)_4 \cdot 24Aq]$ occurs as pale amethyst octahedral odorless crystals which are efflorescent on exposure to air and have an acid styptic taste with a slightly acid reaction. It is insoluble in alcohol but is freely soluble in water, even in the proportion of 1:3.

(487). POTASH or COMMON ALUM $[K_2Al_2(SO_4)_4 \cdot 24Aq]$ occurs as semitransparent octahedra which are

usually obtained by crystallizing out the Copperas and then adding potassium chloride to the (remaining) solution obtained by the aqueous lixiviation of roasted alum shale. It is extensively used in the arts as a mordant for calico-printing and for making paper, colors, dyes &c., while its astringent and styptic properties render it valuable in medicine and the ease with which the decomposing alumina entangles matters renders it useful in water purifying.

(468). **CHLORALUM** as it is commonly called is not an alum, but it is an impure solution of aluminium chloride (Al_2Cl_6) which contains some perchloride of iron.

(469). The pure Aluminium Chloride, which is useful as an antiseptic is of little disinfecting, value as compared with iron and zinc salts although it possesses the advantage of being a deliquescent inodorous solid which is not poisonous and is capable of decomposing sulphuretted hydrogen, phosphine and ammonium sulphide. It may be condensed as yellowish-white crystalline scales either by passing hydrochloric acid gas and bisulphide of carbon vapor over heated clay or by letting a current of dry chlorine play on a mixture of pure alumina (obtained by calcining ammonia alum) and charcoal, which (mixture) is being strongly heated in an earthen retort. Thus:— $Al_2O_3 + C + Cl_2 = Al_2Cl_6 + 3(CO)$.

POTASSIUM PERMANGANATE.

(490). *Chameleon-Salt*, (K_2OMnO_4 or $KMnO_4$) is obtained as prismatic crystals that reflect a dark green color but are red by transmitted light. It is very soluble in water to which it imparts a purplish red hue which, according to the degree of dilution, converges to delicate tints of pink: provided the water be pure; but, if there be present the slightest particle of organic matter, the solution immediately turns brown.

(491). This permanganate, which is a far more stable salt than the *Manganate*, acts as a powerful oxidiser on all substances having an attraction for oxygen, as it readily gives up a portion of its constituent oxygen [$10(FeSO_4) + K_2OMnO_4 + 8(H_2SO_4) + Aq = 5(Fe_2O_3 \cdot 3(SO_4) + K_2SO_4 + 2(MnSO_4) + 8(H_2O) + Aq$] and in the presence of a strong alkali it decomposes albumen making it evolve a rather large amount of its Nitrogen as Ammonia, which latter, in water, is usually spoken of as albuminoid ammonia."

(492). When well exposed to air it freely acts as a deodorant and disinfectant and when it comes in contact with organic matter, (especially that in a decomposing state) it is at once decomposed, but freely parting with a largeish proportion of its oxygen it rapidly oxidises these organic matters which it renders innocuous.

(493). It destroys bacteria with great rapidity and freely absorbs sulphuretted hydrogen and, although not quite so powerful as some other disinfectants, it has the advantage of being odorless—Hence it is well adopted for use in the sick room.

(494). **CONDY'S FLUID** is merely a solution of the permanganates of potash and soda, and is protected by patent.

(495). *Permanganate of Soda*, (Na_2OMnO_4) has the same properties as permanganate of potash, than which it is a good deal less expensive.

POTASSIUM BICHROMATE.

(496). *Dichromate of Potassium or Red Chromate*, [$K_2Cr_2O_7$ or $K_2O \cdot 2(CrO_3)$] which is largely used in the arts

for bleaching oils as also for a dye and the basis of many chrome pigments is usually prepared by roasting native Chrome Iron ($FeO \cdot Cr_2O_3$) in the presence of alkali, and carbonate of potash; after being extracted with water it is treated with nitric acid and recovered by repeated crystallisations as beautiful tabular orange-red crystals which have a very great coloring power and are rather powerful oxidisers, whose disinfecting power is based on the ease with which their constituent potash exchanges a large part of its chromic acid for sulphur and the stronger halogens.

(497). When a mixture of bichromate of potash with sulphuric acid is added to some oils, the coloring matter of the oil is destroyed by becoming oxidised at the expense of the chromic acid (CrO_3) contained in the dichromate, and potassium sulphate and a sulphate of sesquioxide of chromium is formed, while the liberated oxygen combines with the oil [$K_2Cr_2O_7 + (H_2SO_4) = K_2SO_4 + Cr_2O_3 \cdot 3(SO_4) + 4(H_2O) + O_2$]; similar reactions take place on contact with other organic substances: whence the valuable disinfecting power of the bichromates is more than double that claimed for carbolic acid

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CLINICAL FEATURES OF BERI-BERI.*

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Manbhung.

THE subject of this paper is a disease about which our knowledge is by no means very clear. It is the want of a clear and accurate knowledge of this disease that has prompted me to take up this subject.

From CHEEVERS' Conmentary, I learn that Dr. MALCOLMSON referred to a peculiar form of paralysis of the lower limbs due to peripheral neuritis, and to alteration in the lower part of the spinal cord. In most of his cases there was more or less paralysis; 57 out of 65 had numbness of feet and hand, 40 had pain and soreness, 40 oedema, 33 spasms, 11 had the gait of the sheep, 12 tottering in walking, and 2 a sense of weight in the limbs or thorax (*J. M. G.*, January 1882.)

MOREHEAD says that it (beri-beri) is a general droop of a complicated character. That the blood is sufficient in quantity, but there is water in undue proportion. It is present in the scorbutic diathesis.

As to the cause, he says: "So watery blood and feeble heart predispose and exposure to cold and damp becomes the exciting cause."

The disease he calls beri-beri presents the following symptoms, which may come on suddenly or gradually: weakness, unwillingness for exertion, apression and weight at the epigastrium, dyspnoea, palpitation, quick, small pulse, intermittent and fluttering, scanty high-colored urine, vomiting, anasarca and bloated appearance; serous effusion into the areolar tissue of skin, and into the pleura, pericardium, and peritoneum, pain, numbness, stiffness, with oedema of lower extremities, which subsequently become paralyzed. Among morbid appearances he mentions anasarca, oedema of lungs, hydrothorax, hydropericardium, ascites, cranial effusion. In some cases traces of old or recent inflammation of viscera.

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Professor McLEAN defines beri-beri as an extremely fatal disease, characterised by anæmia in an extreme degree, ascending motor paralysis, chiefly of the lower extremities, scanty high-colored urine, general œdema with effusion into serous cavities, chiefly the pleura and the pericardium; occasionally acute pain and oppression at the epigastrium. Death occurs generally suddenly either from dropsical effusion into the thoracic cavities, failing at the heart, or embolism. As to causes, he lays stress on climatic conditions unfavorable to health, all of which bring about anæmia or scurvy. As to its relations to scurvy, he says: "I am strongly of opinion that scurvy plays a much more important part as a predisposing cause than is generally accepted." He divides the cases into acute and chronic. In some of the acute cases he says the whole duration of the case does not exceed 24 hours, while there is intense anæmia, paralysis, generally œdema and effusion of fluid into the cavities. He distinguishes the two types of the disease, and says sometimes the paralytic symptoms are marked, in others dyspnoea and dropsical symptoms are more urgent. In all there is evidence of intense anæmia, anasarca, prostration, quick small pulse with subnormal temperature and scanty urine. As to morbid anatomy, he refers to the watery condition of the blood with diminution in the number of red-blood globules and presence of water in every organ or tissue of the body; the heart is enlarged, soft and flabby; the spinal cord is almost always congested, and fluid is found in the spinal cavity.

Sir W. MOORE considers beri-beri to be a peculiar form of scurvy. The symptoms of the disease, according to him, are great debility, stiffness of legs and thighs, succeeded by numbness and swelling of those parts, with great difficulty in using the limbs. Then the body becomes swollen, the breathing quick, and the pulse feeble, while the urine is scanty and thirst great. Diarrhoea and incontinence terminate the illness.

Sir J. FAYRER defines the disease as follows:—

"A disease characterized by anæmia, anasarca, degeneration of muscular tissue, effusion into the serous cavities, debility, numbness, pain, and paralysis of the extremities, specially the lower, pericardial anxiety, pain, and dyspnoea, scanty, high colored urine; and in some cases drowsiness and sleepiness." Among causes, he mentions certain conditions of soil, air, and water, food deficient in quantity, quality or variety. Death results rapidly in some acute cases, with symptoms of effusion into thoracic and abdominal cavities, or within the skull; by exhaustion syncope, or formation of coagula either in systemic or pulmonary circulation. Sir JONESTON suggests that the symptoms might be due to the presence of some kind of hæmatozoön in the blood.

I now beg to place before you, gentlemen, the views held by different observers on some epidemic outbreaks of disease which have been called the "beri-beri," "acute epidemic dropsy," "beri-beri fever," and "acute anæmic dropsy." The first of these outbreaks took place in the criminal prison at Singapore in the year 1875, and continued till 1880. Dr. J. ROWELL, Principal Medical Officer, Straits Settlements, noticed that the symptoms set in either gradually or suddenly, and that they were weakness, lassitude, inaptitude for exertion, general

anasarca, sense of fullness at the pit of the stomach, tension and weight at the pericardium, dyspnoea, vomiting, uneasy sleep, feeble, frequent pulse, fluttering of the heart, muscular spasms, stiffness of the legs and thighs, followed by numbness, later on by œdema, and sometimes paraplegia; with a scarlet aspect the extremities were cold. The bowels were torpid and urine scanty, high-colored, albuminous. The intellect remained unclouded, the gums were spongy. Burning of hands and feet was not observed as a symptom, nor any fever. Mortality ranged between sixteen and twenty per cent. Death sometimes took place suddenly within a few hours.

Soon after this outbreak in Singapore, an epidemic disease invaded Calcutta and its neighbourhood in 1877. It was at first styled the "new disease," and then different observers applied different epithets to it. Some called it "beri-beri" others "acute œdema," others again "epidemic dropsy," and a few took it to be an exanthematous fever. A similar disease also appeared soon in Dacca, Shillong, and Sylhet. Most of the popular practitioners at Calcutta, Native and European, witnessed the epidemic and had to treat cases of the disease. The members of the Calcutta Medical Society took a great interest in the disease, and interesting descriptions took place at their meetings as to the nature of this new disease. There was a great difference in the opinion of different observers.

Dr. SMITH said that scorbutic dyscrasia, which is so prominent a feature in beri-beri, was markedly absent in this disease. Even latent scurvy seemed to be absent in many cases. Nervous pain and sensation of burning were commonly experienced, and discoloration of the skin was noticed.

Dr. HARVEY considered the disease to be beri-beri. He found distinct anæmia in all, and anæmic bruit in several. Anæmia was a constant condition which he found. Many suffered from fever. There was enlarged spleen in many but not in all cases. A few had scorbutic or at least spongy gums. In two cases he found an approach to paralysis of the lower limbs, as if from effusion of serum into the spinal canal, and in a good many more there was great difficulty in walking, apparently not due to paralysis, but to the local condition of the limbs.

Dr. McCONNELL reported that the disease was not at all special or peculiar; that its essence was intermittent fever, with great anæmic exhaustion; œdema of the feet, or in some cases the upper limbs, or even general dropsy occurring in person reduced to low health. Dr. RAMMOY RAO, then in charge of Sambhoo Nath Pandit's Dispensary, Bhowanipur, having returned from Madras, where he had seen 500 cases of beri-beri, had to treat 150 cases of the new disease. He had no difficulty in identifying the disease as beri-beri, which he had treated in Madras.

Dr. COATES had seen beri-beri among the Madras sepoys at Cattaok, and also cases of the new disease, or acute œdema in Calcutta; and he was of opinion that the disease that he saw in Calcutta was not the same as what he had seen among the sepoys in Cattaok, viz., beri-beri.

Dr. O'BRIEN's experience of about 200 cases in Shillong led him to form the opinion that the disease was as contagious as measles, scarlatina, and other infectious exanthemata. He did not find scorbutic diathesis in a

large number of cases. In several cases there was no appreciable fever. He had met with oedema of the lungs, and pneumonia in some cases, and had met with several deaths.

Dr. K. McLEOD, who had ample opportunities to elicit information on the subject of the new disease at the time, has given his views on the subject in the elaborate paper on "Epidemic Dropsy," read by him before the Epidemiological Society of London. He says: "I incline to the belief that the disease was really an exanthematous fever, the dropsy constituting a phenomenon homologous to eruptions of such diseases." Again: "Nor do the nature and course of the disease warrant any suspicion that it was due to any intestinal parasite, similar to that which has been found in Ceylon and Assam, to be associated with the prevalence of anæmia and cachectic states; frequently terminating in dropsical effusion.

Among the symptoms of the disease he mentions: Dropsical swelling of the limbs, occasionally of the body and face. Fever sometimes before, sometimes after, the swelling, in some cases absent; diarrhoea commonly, dysentery in a few; burning and pain in the affected limbs at commencement. Purple livid discoloration of the skin in some cases, disappearing on pressure; urine scanty or excessive without albumen. Dyspnoea, cough and palpitation in most cases, great emaciation, prostration and anæmia. Death often sudden and early. Of the several symptoms dropsy constitutes the most prominent and apparently the essential and indispensable feature of the disease: the other symptoms might or might not be present. Pyrexia, a frequent if not a constant symptom, skin irritation and deep-seated pain in the limbs is a decided feature of the disease. Paralysis was absent. An exanthematous eruption was a feature of the disease in a certain proportion of the Calcutta cases. Disturbances of respiration and circulation were quite prominent phenomena. Anæmia was an essential feature of the disease, but evidences of scorbutic dyscrasia were less marked.

After reviewing the reports on the outbreaks of "beri-beri fever" in different parts of the country, Dr. N. CHEVERSE formed the opinion that the disease belonged to the class of exanthemata, and that the dropsy and the paralytic symptoms were only the sequelæ of the disease. And further he says: "Although its manifestations are numerous and complex, I think that on carefully studying its phenomena we cannot fail to arrive at the conclusion that the acute epidemic beri-beri is not, as some have thought, a group of diseases, but a malady quite distinct from all others, a fever of varying type, but characterized by a very marked individuality." Regarding its relation to scurvy, he says: I think that, when we state the fact that, wherever beri-beri prevails, it specially selects the scurvyed, we are free from the error of supposing that acute beri-beri is an expression of scorbutic cachexia; and regarding its connection with malaria, he says: I think we are justified in concluding that beri-beri is not a malarial fever, but that the victims of malarial cachexia are specially liable to suffer from its effects." Viewing beri-beri in its paralytic aspect, Dr. CHEVERSE says: "One of the leading sequelæ of beri-beri being

anasarcous and dropsical effusion into the areolar tissues and serous cavities, the occurrence of spinal paralysis in various degrees as one of its complications is clearly accounted for." Then he says: "The stiffness of the lower limbs is frequently due to the presence of hard oedema, not to spinal paralysis; but in many cases of beri-beri distinct impairment of motor and sensory power in the lower limbs had been observed."

We may observe how very difficult it was to come to a definite opinion as to the nature of the disease, and how very different were the views held by the different observers. Even Drs. HARVEY, COATES, and RANBY ROY, who had seen true cases of beri-beri in Madras and elsewhere, differed in their opinions; whilst Drs. HARVEY and ROY thought the disease to be beri-beri, Dr. COATES did not. Dr. SMITH also was inclined to think that it was not beri-beri. Dr. McCONNELL thought it was essentially intermittent fever neglected, aggravated and complicated. Both Dr. McLEOD and Dr. CHEVERSE held that the disease belonged to the class of exanthemata, and yet their views were different. While one takes it to be true epidemic beri-beri and calls it by the name "beri-beri fever," and lays particular stress on the fever and eruption on the skin, and considers the dropsy and the paralytic symptoms to be sequelæ of the disease, and considers the malarial and scorbutic dyscrasia to be favorable circumstances, and does not say anything about anæmia, the other thinks the disease to be different from beri-beri and calls it "epidemic dropsy," and says that the dropsy constitutes the essential and indispensable feature of the disease, the other symptoms might or might not be present. Next to dropsy, he considers anæmia to be an essential feature of the disease, and further that fever was frequently present, if not constantly. An exanthematous eruption was a feature of the disease in a certain proportion of the cases only, and that the symptoms were not likely to be due to any intestinal parasite.

This brings us to the outbreak of an epidemic disease called by the name of "acute anæmia dropsy," which took place in the Island of Mauritius in 1878-79. From Dr. LOVELL, the Chief Medical Officer's report, we gather that the most prominent symptoms of the disease were anasarca of the lower extremities often extending to the upper extremities and trunk and seldom to the face, and in worst cases complicated with ascites, hydropericardium, hydrothorax. The premonitory symptoms were diarrhoea or vomiting or both, deep-seated pain in the limb, epigastrium, and abdomen, accompanied with slight fever and in most cases by a roseolar rash. Dr. LOVELL said that the anasarca was one of the most striking features of the disease, and anæmia was a constant feature. He distinguishes "acute anæmia dropsy" from beri-beri. The first distinction is the absence of paralytic symptoms; second, the low mortality (2 or 3 per cent.); third, the presence of the preliminary symptoms of diarrhoea or vomiting, which were absent in beri-beri; and fourth, the presence of the rash which is not met with in beri-beri. His conclusion is that the acute anæmia dropsy is a disease sui generis, not due to malaria, nor identical with beri-beri.

Beri-beri prevailed very severely in 1885 and 1886 in Sumatra and Java, and caused a very heavy mortality, which

and the Netherland's Government to depute Professor FRELHARTING to investigate the cause of the disease, and to suggest preventive measures. Here the disease was characterised by the peculiar paralytic symptoms in addition to the anæmia. Post-mortem examination of bodies showed that the symptoms were due to degeneration of nervous tissues, particularly the peripheral nerves. Professor FRELHARTING discovered a peculiar kind of micro-organism in the blood of patients. Dr. MAX GLOGNER, of the Dutch Archipelago, noticed a constant weariness and painfulness of the lower extremities, and abnormal condition of the heart, shortness of breath. He found that not only the coloring matter of the blood, but also the number of red blood cells, was diminished. He admits that in the course of the disease a pernicious influence on the blood is visible, and he compares beri-beri with malarial fever, and points out certain resemblances between them, including the efficacy of quinine in beri-beri.

Beri-beri is endemic in Ceylon. Here it was that Dr. KYNSEY found the *anchylostoma duodenale* in the intestines of the patients suffering from beri-beri. He attributed the anæmia and the dropy to the presence of these worms in the intestines, and did not recognise any other disease as beri-beri apart from anchylostomiasis.

Surgeon-Captain EVANS considers beri-beri to be due to malaria. He had seen the disease as it prevails in Burma. There the prisoners in the Mandalay Jail suffered from the paralytic form of the disease. He had also seen the disease in Assam, where it assumes the progressive pernicious anæmic type, accompanied by dropy. From careful microscopical examination of blood in each case, he comes to the conclusion that both the forms of the disease have a common origin in the blood poisoning produced by malaria. (*I. M. G.*, December 1892).

Dr. THOMAS, Medical Officer, 17th M. I., in his paper on the subject of beri-beri, gives his views regarding it, after having treated a large number of cases. He says: "In a very large number of my cases the proximate cause was due to the presence of *anchylostoma duodenale* in the intestinal canal; the greater the number of these parasites present, the greater the severity of the disease.

Among the symptoms of the disease noticed by him are: weakness and stiffness of the ankles, legs, thighs, numbness followed by burning in the sole of the foot; œdema, puffiness, swelling and lividity of the face; unsteady, tottering gait; great prostration; scorbutic taint in 41 per cent. of the cases; pain in the ensiform cartilage; loss of sensation in the feet and legs; cutaneous anæsthesia; loss of irritability to mechanical and electric stimuli; tenderness of the gastrocnemii muscles; absence of patellar tendon reflex; spasm of the limbs; dyspnoea hurried; irregular and painful respiration; serous effusion into the cavities; general anæmia; pericardial anxiety; irregularity and palpitation of the heart; great nervous depression; peri- and endo-cardial effusion with failure of the heart; scanty high-colored urine.

This is also the view which Surgeon-Major GILES holds as to the nature of beri-beri and kala-azar, diseases which have prevailed so severely in the province of Assam within the last few years. Deputy Surgeon-General

COSTELLO, Principal Medical Officer and Sanitary Commissioner for Assam, in his Annual Report for 1890, makes special mention of these two diseases. He first describes the peculiarly unhealthy and insanitary conditions in which the people live—conditions which are most favorable to the production of malarial fever, and then gives his opinion that he could in no instance distinguish any cases as being in the least different from a very aggravated form of malarial fever, with its usual results when so aggravated and neglected. Further on he says that "the opinion of the best Civil Surgeons of the province, as well as my predecessor, an officer of great experience, was, and is, that the apparently peculiar form of fever is nothing more than a very aggravated and often neglected malarial fever, and that its so-called distinguishing features, such as anæmia, enlargement of the spleen and liver, with dropy, diarrhoea, &c., &c., are ordinary results of unusually severe and neglected malarial fever." He also recommended to Government that an officer should be specially deputed to investigate into the causes of the heavy mortality from these two diseases.

Thereupon, Surgeon-Major GILES was specially deputed to Assam. Dr. GILES submitted his report in 1890, I believe, but I regret I have not got a copy of his report, and I shall therefore refer to the *resumé* of the report as it appeared in the *Indian Medical Gazette* (June-July 1892). Surgeon-Major GILES did not find any such disease as the epidemic peripheral neuritis of MALCOLMSON in Assam, and after comparing the cases, he came to the conclusion that kala-azar and beri-beri were identical and not two different diseases. Then he says: "The disease is characterized by extreme anæmia, a peculiar leaden-tone of the complexion, while the conjunctiva presents a peculiar bluish-white tint, dyspepsia, occasional attacks of pyrexia, diarrhoea, distressing breathlessness, and finally dropsies of the serous cavities and of the lungs, and cellular tissue. The patient is reduced to a helpless condition. Profound depression of the system, persistently subnormal temperature. The immediate cause of death is commonly either dysentery, pneumonia or bronchitis. The stools of patients contain many *anchylostomata*; and post-mortem examinations of bodies shewed that the intestines harboured these nematode worms in numbers, where they acted as so many blood-suckers." From all these, Surgeon-Major GILES came to the conclusion that the anæmic and other symptoms of the disease were attributable to the presence of this worm in the intestines, and gave the name of, "*anchylostomiasis*" to the disease known as beri-beri and kala-azar in Assam.

Dr. DONSON, late Civil Surgeon of Dhubri, who enjoyed very favorable opportunities of studying the diseases, and who made very careful and searching enquiries into the prevalence of anchylostomiasis in India, is worth referring to in connection with these diseases. Dr. Donson's experiments on the emigrants passing through Dhubri to Assam prove the almost universal existence of the *anchylostoma* in Bengal, Madras and Nepal, when 65-88 per cent. of the healthiest looking of the imported population of Assam is found to be affected with the parasite while in transit from the recruiting districts to the labor districts. In one place Dr. Donson says: "In my enquiries I have noticed numbers of cases where the parasite was

Spinal, but without anaemia was wanting altogether, or not present at first. Again, all the healthy cadavers and prisoners, who, showed not a trace of anaemia, although in a large proportion in them the anchylostoma existed in numbers. In others it had health, the anaemia has been intense and the parasite found; and in several dropsy and anaemia were found but no parasites. These anaemia cases from the first were looked on as cases of beri-beri." In another place Dr. Dobson says: "I contend that malaria has a great deal more to say to this excessive mortality in this district (Goalpara) under the heading kala-azar than Surgeon-Major GILES gives it credit for; and further we have still to learn more regarding the pernicious effects produced by anchylostomiasis before we can credit them with the disease known as kala-azar, and which latter, I take it, is malarial poisoning."

Dr. DOBSON makes a distinction between the kala-azar and the beri-beri cases. In the former cases emaciation is a leading symptom, but anaemia is not generally present. The spleen is much enlarged. Generally there is no dropsy, and there is a history of fever. The beri-beri cases have intense anaemia, at times coupled with dropsy, which may be general or partial, but no enlargement of spleen.

Dr. SANDWICH of Cairo has written an excellent paper on anchylostomiasis. He says the digestive system is first affected and the symptoms begin with pain in the epigastrium, the appetite is affected, sometimes there is an earth-hunger, constipation is a constant symptom, the urine is pale in color and of low specific gravity, with a trace of albumen in most advanced cases, pain in the head, giddiness, pain and weakness in the knees; there is palpitation, hypertrophy of the heart in some advanced cases, dyspnoea and noises in the ears, marked anaemia, pallor, oedema of the legs, diminution in the number of red-blood cells and the amount of haemoglobin, sub-normal temperature and debility and wasting. Dr. SANDWICH is of opinion that the disease is due to the presence of anchylostoma in the intestines. He does not consider his cases as beri-beri, which he says would seem to be a specific peripheral neuritis.

From the above brief survey of the views held by the different authorities in regard to beri-beri, we gather that the term has been applied to different or at least dissimilar diseased conditions of the body, that by one set of observers the disease is considered to be an outcome of scurvy or a peculiar manifestation of that pretty well recognised disease. Among them we find the names of MOREHEAD, MACLEAN, and Sir W. MOORE.

Then we find at least two if not three observers who take beri-beri to be a peculiar exanthematous disease-infectious and having its period of incubation and development and abatement, and its sequelae. One of them, Dr. CHURCH, takes the disease to be a form of fever and calls it beri-beri fever. The other (Dr. McLEOD) takes it to be essentially a kind of dropsy. Dr. O'BRIEN also thought the disease to be exanthematous in nature.

Dr. ROWATT of Singapore calls the disease that broke out there to be beri-beri. Dr. LOVELL of Mauritius takes his cases to be a peculiar form of dropsy due to anaemia.

Then again, we find some who consider beri-beri to be a peculiar manifestation of malarial cachexia, or at least analogous to malaria, and due to similar causes or originating under similar circumstances. Among them we

find the names of Dr. MAX GLOESSEN and Dr. HUGH. We may also mention the name of Dr. CORRAO holding the same view, though it is not beri-beri exactly he refers to, but kala-azar, which he takes to be the result of malaria. Dr. DOBSON also thinks kala-azar to be mainly, if not solely, due to malaria; and even beri-beri is probably not due to what is called by another set of observers to be anchylostomiasis. Among them we find the names of Dr. KYNSEY, Dr. THOMAS and Dr. GILES, and lastly, while Dr. GILES is of opinion that the kala-azar and the beri-beri of Assam are the one and the same disease and due to the presence of anchylostoma duodenale in the intestines, Dr. SANDWICH of Cairo, while admitting that the pernicious anaemia of the tropics is due to the nematode worm, does not think it to be identical with beri-beri but takes beri-beri to be a kind of epidemic multiple or peripheral neuritis as described by Dr. MALCOLMSON fifty years ago, and as has been lately observed by PRONKLEERING and WINKLER in Sumatra and Java. Again Dr. DOBSON, while admitting that a peculiar form of anaemia (now malarial) might be due to the presence of nematode worm, opposes Dr. GILES' theory that the kala-azar and beri-beri of Assam are due merely to the presence of the worm in the intestines, as he has found the healthiest men of different parts of the country to harbour such worms without in the least suffering any evil effects from the same.

THE USES OF NARCOTICS AND STIMULANTS AND THEIR EFFECTS ON THE HUMAN CONSTITUTION.

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I WILL first review the known varieties of the most important drugs used as intoxicating agents, giving, where practicable, their chemical composition and describing the properties of their constituents. The beverages, or stimulants, properly so called, will come last for consideration. In treating of them, I will devote some space to the description of some of the commonest forms of adulteration of wines, as many serious evils to the system may be traced to these adulterations as much as to abuse of excess and intemperance.

From the use of narcotics and stimulants, in some form or other, by mankind in general, it would appear that the craving for such excitement arises from a natural want, and that the same instinct which drives man as well as the inferior animals to seek for those healthy aliments which contribute to their bodily support and nourishment impels him to seek for these indulgences: whence it may be presumed that their use is a necessity.

First, in the order of these drugs is *Tobacco*, which is generally consumed, in that state almost in which it is found in nature. The changes it undergoes being inconsiderable and, in most cases, inexpensive before it is made fit for human consumption. It is used for chewing, smoking, and snuffing only. In Europe its use is chiefly restricted to smoking and snuffing. In Asia and America all three modes are resorted to, only there is a difference, in manner, according to the tastes and habits of the different people. In Europe the smoke is inhaled either from pipes or leaves rolled into spirals; in Asia the drug is kneaded into a sweet and odorous

compensated and its smoke inhaled through a pipe peculiar to the people who use it. In Europe the weed is preferably consumed in its raw state; in Asia it is softened and weakened. There are races, however, in the East, who, like the Europeans, are fond of smoking the unmanufactured leaves—the Oorias, for example, and some people on the West Coast of the Indian Peninsula, as well as some of the islanders of the Eastern Archipelago. In America smoking is not unfrequent, but chewing is nearly as much a favorite method as is smoking in Asia and Europe. There it is used in the form of quids, which cause a profuse secretion of saliva in the mouth, and it is not uncommon to see ladies and gentlemen in the midst of social gatherings squirt out the tobacco liquid, in volumes, to the infinite disgust of people who are unaccustomed to such sights.

In India also tobacco is used for chewing, which is solely confined to the very lowest classes. Low caste men and women and drain-coolies of the hill tribes, are rather fond of this use of raw tobacco, but I have seldom known them to chew unmixed tobacco. What they do is to take a chip only at a time and chew it with betel and nut. Cigar smoking is least in fashion, and does not seem to suit the Hindoo taste, though it may find favor amongst one or two comparatively barbarous races.

Though very largely used in India, and most other Asiatic countries, snuffing is not so general as is the smoking of manufactured tobacco, to gratify the narcotic appetite. In this latter form it fully satisfies the natural demand, as well as contributes to a luxurious indulgence, peculiar to the national character. With the rich and the well-to-do classes tobacco-smoking is a luxury; but with the operative and the middle classes it is so indispensable a necessity, that a poor laboring man may dispense with some of the necessities of life, for a whole day, but he cannot undergo the deprivation of tobacco for even one hour. Amongst the richer classes generally, it is indulged in not so much for the gratification of an appetite as for luxury and external display. The tobacco of the rich is so much spiced and perfumed that the presence of its chief constituents is scarcely perceptible; amongst them the external array of tobacco-smoking receives greater attention than the practice itself. In large assemblies, and on festal occasions the glittering smoking-apparatus forms an important and conspicuous ornament of a native gentleman's saloon and drawing-room.

The practice obtains amongst the masses of the people, as one of those things which the humblest amongst the people cannot do without; a man may not have the means to provide himself with a decent water pot; his resources may not allow him to replace his cracked and broken stone-platter with a sound one to eat his rice from, but his hooks and its adjuncts will always be found complete. It may be, a family is living on half rations for days together, but they always have the means for entertaining a host of visitors with *chillum* after *chillum* of tobacco, for hours together. A Bengalee's passion for tobacco is a prominent feature in his national

character. And employers make a great mistake if they think they will get a great deal of work out of a laboring man by stopping his smoke, without which he is worse than useless. It is true that much of a laboring man's time is used up in tobacco smoking, but if he be kept without his smoke that time will be wasted in yawning and yawning, or frittered away in trifling with his tools.

People living in the interior, and far removed from the metropolis, for example, are more addicted to smoking and contract it earlier than those living in the metropolis itself. In villages boys in their teens are hard smokers, and the men, also, are most passionately fond of smoking. With the ordinary villager in Bengal nothing short of 50 smokes will suffice during his waking hours while with us eight to ten are ample. And it is to our credit that while smoking is almost universal in this country, it is wholly restricted to the male population amongst the Hindoos. Up-country the pipe may now and then be seen in the hands of respectable Mahomedan females, but it is a forbidden indulgence amongst Hindoo ladies. We should not in this estimate take into account the practices of women who have already set all laws human and divine at defiance in graver matters.

It has been supposed that, next to salt, tobacco is the article most extensively used by man. In Europe, though the duty on tobacco is very heavy, its use on that account is not diminished to any great extent, and the consumption per head varies from 2 to 12 lbs. Besides what is obtained by indigenous cultivation, in India, more than 140,000,000 lbs. are annually imported from America, and the share of distribution for each country of import ranges from 300,000 to 38,900,000 lbs. The largest tobacco consumers, in proportion to the population, are the Germans, and the most abstemious are the Portuguese.

It has been estimated that nearly eight hundred millions of the human race consume tobacco, and the average consumption per head is 70 oz. The total growth is nearly two millions of tons, which at 800 lbs. to an acre would require more than 5½ millions of acres of rich land. One other fact in connection with the effect of tobacco cultivation on the soil in which it is grown. Agricultural chemistry has, by indisputable scientific facts, demonstrated that no crop, that is grown for human subsistence or luxury has so deteriorating an influence on the productive powers of a soil as has tobacco. Vegetable substances, when burned in the open air, leave a residue of inconsumable mineral matter, or ash, the quantity of which determines their exhaustive effect on the soil. The leaves of plants abound in this incombustible ash, and those of tobacco yield proportionally the largest quantity. A dried tobacco leaf, when burned, yields from 19 to 28 per cent. of ash, or the proportion of ash to other matter is nearly one-fourth; and this ash belongs to the class of soil constituents which are most necessary to vegetation. The weight of these constituents withdrawn from the soil is in direct proportion to the weight of the leaves gathered and, bearing in mind the proportion of these ashes to other ingredients, the exhaustion to the soil caused by the cultivation of tobacco may be imagined.

It was a subject of enquiry whether tobacco, in whatever form taken, has any injurious effect on the health of

* The lower classes of the nation perhaps, but ladies never.—Ed., I.M.R.

man. These who appreciate its use on the score of injurious tendency often base their assertions on purely fanciful theories. They have not been able to adduce a single fact based on chemical or physiological research, which would entitle their theories to credit. I cannot, however, forbear mentioning a theory which, though similarly unsupported, is still deserving of consideration as my own experience gives it the color of truth. It has been maintained that amongst the constituents of tobacco, there is some nicotine and empyreumatic oil which have poisonous properties, and which, if inhaled by persons of tender youth, whose organs are in a state of development, have a tendency to stunt their growth and give their bodies an appearance of dryness and emaciation, and that tobacco when indulged in by a youthful pair, will render their offspring diminutive, sickly, and bony;—all these evils, it has been urged, are caused by the above poisons having the power of arresting the inhalation of oxygen in respiration. Whatever truth there may be in the theory itself, the effects supposed are apparent in many cases in this country amongst those who are addicted to an early indulgence of this weed. I will quote some of the other evil effects which tobacco in any one of its forms is said to produce. When smoked to excess, by persons unaccustomed to its use, it produces nausea, vomiting, in some cases purging, universal trembling, staggering, convulsive movements, paralysis, torpor, and death. Another authority says "Tobacco disorders the assimilating functions in general, but particularly as I believe, the assimilation of the saccharine principle. Some poisonous principle, probably of an acid nature, is generated in certain individuals by its abuse, as is evident from their cachectic looks and from the dark and often greenish-yellow tint of their blood. The severe and peculiar dyspeptic symptoms sometimes produced by inveterate snuff-taking are well known; and I have more than once seen such cases terminate fatally with malignant disease of the stomach and liver." Great smokers also are liable to rodent ulcers and cancerous affections of the lips. Excessive use of snuff blunts the sense of smell, alters the tone of voice, and occasionally produces dyspepsia. In rare cases apoplexy and delirium. Drs. PEREIRA and CHRISTISON, however, agree in maintaining that no well ascertained ill effects have been shewn to result from the habitual practice of smoking.

Whence came tobacco to be so extensively and universally used? Is any one of its constituents possessed of the virtues which affect the animal constitution in the same way as most of the edibles are known to do? We know that none of its constituents is capable of producing any of these effects, as will be apparent from the following analysis given by POSSELT and REINMANN:—

| | | | |
|-----------------------------------|-----|-----|---------|
| Nicotina ... | ... | ... | 0.06 |
| Concrete vegetable oil ... | ... | ... | 0.01 |
| Bitter extractive ... | ... | ... | 2.87 |
| Gum with malate of lime ... | ... | ... | 1.74 |
| Chlorophyll ... | ... | ... | 0.267 |
| Albumen and gluten ... | ... | ... | 1.308 |
| Malic acid ... | ... | ... | 0.51 |
| Lignine and a trace of starch ... | ... | ... | 4.969 |
| Salts ... | ... | ... | 0.734 |
| Silica ... | ... | ... | 0.088 |
| Water ... | ... | ... | 88.260 |
| Fresh leaves of tobacco ... | ... | ... | 100.836 |

The only two, of the above constituents, which possess the nutritive principle are albumen and gluten, of which there is less than three parts in nearly 200. But whatever good they do is more than neutralised by a strong odorous poison taken into the constitution in the consumption of tobacco. But even without it, they would not contribute to nourishment, since tobacco is not so used as to come within the influence of the digestive function. There is first the volatile alkali which may be found by infusing tobacco leaves in water, acidulated by sulphuric acid, and distilling the infusion with quicklime, when there comes over, mixed with water, a small quantity of a volatile oily colorless alkaline liquid, which is heavier than water, and to which the name of *nicotina* has been given. It has the odour of tobacco, an acrid burning long continuing tobacco taste, and possesses narcotic and very poisonous qualities. In this latter respect it is scarcely inferior to prussic acid, a single drop being sufficient to kill a dog. Its vapour is so irritating that it is difficult to breathe in a room in which a single drop has been evaporated." The most which has led to its large consumption is the property it possesses of gratifying the appetite for narcotic indulgence in man. But its effects as regards that object can with difficulty be described. Even the heaviest consumer will be at a loss to define his sensations while under the influence of this narcotic. We all know that it possesses no perceptible intoxicating quality. The only thing that can be said of it is that, like many intoxicating drugs and beverages, when once you have begun the indulgence, you cannot do without it. It cannot, however, be denied that it does afford a kind of a relief to the fatigued body after toil and trouble. In habitual smokers, the practice provokes thirst, increases the secretion of saliva, and produces that remarkably soothing and tranquillising effect on the mind which has caused it to be so much admired and adopted by all classes of society and by all nations, civilised and barbarous. We know that it also forms a great aid to reflection. Poets and essayists in our own country, when under the inspiration of the muses, find the pipe to be indispensable to the rapid and uninterrupted flow of their thoughts. To the chess-players the tobacco pipe is an inseparable adjunct. If the supply falls short, they are undone, and find themselves quite incapable of moving the pieces. Tobacco, however, is said to possess medicinal virtue. It is a great antidote to strychnia. A sufficient quantity of the juice of tobacco-leaf administered to the persons affected by the poison has been known to effect a cure. It is also used in some places as a sovereign application to wounds and bruises and the bites of poisonous serpents.

I will now allude to the other drugs. Next to tobacco in the ascending scale are *gunja* and *churus*, both of Asiatic growth, and both are more or less consumed in the East for their intoxicating property alone. There is but one form in which they can be used, which is by burning, in a *chillum* and inhaling the smoke through a tube. *Gunja* is very common in India, and grows in abundance in the Upper Provinces. *Churus* is an extract or resin spontaneously exuded by the plant. In describing how these drugs are obtained, we must speak of the plant and extract together. A plant from which the

resin has been extracted is not fit to be used as *ganja*, to make which it must be dried with the resin, as it is this sticky juice which helps the flower of the plants on each twig to stick with the leaves on it and form itself into a pod. In India art is resorted to to quicken the formation of these pods, and particular care is taken to prevent the plant growing exuberantly leafy. Some say that to quicken the formation of the *ganja*-pods they pour milk at the root of the plant and mix sugar with the earth when it has begun to flower.

The *churus* or juicy extract of hemp is collected from the hemp plant either by scraping with the hand as in Nepal, or by men, covered with leather aprons, running backwards and forwards through the hemp fields and beating the plants violently. The resin thus detaches itself from the leaves, stems, and flowers, and adheres to the leather, from which it is scraped off and formed into balls, known as the *churus* of Cabul. In Persia the resin is detached by pressing the plant on coarse cloths, and afterward scraping it off and melting it in a little warm water. The ordinary *churus* sold in the bazars is the *churus* of Cabul as gathered in Central India. The most valuable drug is that grown in Nepal, and is sold at double the price of the ordinary *churus*. The *churus* of Herat is said to be the most powerful variety of the drug, but it is scarcely known in this country. Another and most economical method of obtaining the resinous extract, is by boiling *ganja* in alcohol, when the extract is obtained pure and is therefore most efficient, while the expense of producing it is small; but this method is not in use in India, and it is not known whether it obtains in any other Asiatic country.

Very little is known of the properties of the chemical constituents of *ganja* and *churus*, except that when distilled with water the dried leaves and flowers yield a volatile oil in small quantity, and the resin dissolves readily in alcohol and ether, and is separated from these liquids in the form of a white powder, when the solutions are mixed with water. The resin has a warm bitterish acid, somewhat balsamic taste, and a fragrant odour when heated.

Both *ganja* and *churus*, are not smoked singly; but are mixed with tobacco before burning them in the *chillum* or *kulka*; with *ganja* the leaf is used, with *churus* the prepared tobacco, which in the latter case is simply mixed in the proportion of nearly 3rds., the whole weighing about a tola. A dose of *ganja* is also nearly of the same weight. A leaf or half a leaf is taken accordingly as a stick or half a stick of *ganja* is used, and both cut into chips on a piece of short thick wood and then pressed in the palms of the hand until the whole is nearly reduced to a powdered ball. The *kulka* used for smoking *ganja* is of a peculiar shape, quite unlike that for tobacco smoking, and the same thing may be said of the *kookah*. Its votaries, before beginning to smoke, always take the same of Mahadeo, with whom it was a favorite drug, and then sit in a ring and pass the *kookah* round, nobody taking more than one or two long-sustained puffs. It is a remarkable fact that in this country the votaries of *ganja* always smoke in company and a stranger falling in with them, though unaccustomed to the drug, is often pressed to join the ring of smokers.

A *ganja*-smoker may be made out by his appearance, which is always dry and rosy—eyes sunken and cheeks flattened. *Ganja* fumes are believed to possess the property of drying up the humours of the body, and giving the persons who inhale them a faded look. A *ganja*-smoker can never be slim, and if the habit of excessive indulgence be long preserved in, it brings on dysentery and diarrhoea. These evils are, to a great measure, counteracted by a wholesome diet of milk and ghee, and native confectionery. None of these effects are perceived in *churus*-smokers.

Much has been said of the peculiar sensations produced while under the influence of *ganja* but I have never been able to elicit what those sensations are even from those long inured to its use. The intoxication produced by *churus*-smoking is much tamer than that of *ganja*, and scarcely brings on any hallucination such as is caused by intoxication generally. Persons under its influence scarcely betray any incoherence in manner or speech, or any perceptible evil in their constitutions. But *ganja* is more powerful in its effects, and leaves a more lasting impression on the system of the *ganja* habitue. One becomes choleric and irascible, rough in manner and rough in speech.

Ganja seeds are sometimes boiled with oil for external application for the cure of cutaneous diseases, while the resins taken in moderation produce increase of appetite and great mental cheerfulness, but excess causes a peculiar kind of delirium and catalepsy. And the prolonged use has a great tendency to affect the nerves, the truth is most strikingly illustrated in cases of intoxication produced by *ganja*-smoking. From the latest reports of lunatic asylums, on insanity induced by indulgence in drugs and liquors, it will be seen that *ganja*-smoking has a more powerful tendency in bringing on lunacy and accounts for more than 55 per cent. of these cases.

Hemp is used in another form in Persia and Arabia where it is taken in the form of *haschisch*, small doses of which produce a moderate exhilaration of spirits, or a tendency to unreasonable laughter. Doses sufficient to induce the *fantasia*, produce an intense feeling of happiness in which the sun shines upon every thought that passes through the brain, and every movement of the body is a source of enjoyment. It is a real happiness which is produced by *haschisch*; by this I mean an enjoyment entirely moral and by no means sensual. For the *haschisch*-eater is happy, not like the gourmand or the famished man satisfying his appetite, or the voluptuary in the gratification of his desires, but like him who hears tidings which fill him with joy, or like the miser counting his treasures; the gambler who is successful at play, or the ambitious man who is intoxicated with success.

When the hemp plant is unusually leafy, the leaves that do not adhere to the flowers on the stems, are gathered, dried, and sold as *sikka*, *subjee*, or *bhag*, which is least in favor in Lower Bengal, but like *ganja* is a universal favorite amongst the up-country people and the Pushtobees, with whom it is more in demand than tobacco is in this country. It is used in two forms, as a liquid and as a paste. In Bengal, in whatever form it is used, it is always uprooted and sweetened.

Madhaka. Indulged in its intoxicating power is very much, but when taken in excess, it quite upsets the man producing sensations by no means agreeable; while under its influence the person feels as if he is resting on his head, and the most familiar objects seem as if they are inverted. Its after-effects are to sharpen the appetite and induce an extraordinary voraciousness. And also constipation.

The name of *sikhs* recalls to the mind even of the most heterodox Bengalee many agreeable associations. It is considered a sacred beverage indispensable on the occasion of those social and family gatherings which take place on the last day of the Dusserah festival, when a cup of the mixture is offered to friends and relatives as a pledge of welcome and friendship.

Sidhas or *bharg* takes the name of *majoun*, which resembles the *hashisch* and *dawames* of the Arabs and Syrians when it is a confection of powdered spices, milk and sugar, mixed with almost an equal portion of *bharg* and formed into cakes, whose effect upon the system of the person under its influence differs very little from that of the other varieties of the drug—*churus* excepted. The sensations produced are of an agreeable and cheerful character, exciting to laughter, dancing and singing, and to the commission of various extravagancies. Hemp in one or other of the forms described is consumed, it is supposed, by at least 300 millions of the human race.

(To be continued.)

A MIRROR OF PRACTICE.

TWO CASES OF PNEUMONIA TREATED BY WET SHEET PACKING OF THE CHEST.

BY ASSISTANT SURGEON PURNA CHANDRA DAS GUPTA, L.M.S. Kishoregunj.

A BRAHMIN lady, aged about 32 years, in her ninth pregnancy and advanced to about the 5th month, was suddenly taken ill with fever and symptoms of influenza which lasted for four days. On the morning of the 5th day she took her usual meal and a cold bath, but in the evening fever came on with renewed vigour and pain in her left side. Her medical attendant suspecting pleurisy sent for me for consultation. I found suspicious signs of pneumonia (Stokes' stage) affecting both the bases posteriorly. Antimony, ipecac, salicylate of soda and other antipyretic and antiphlogistic means were tried, but the disease progressed to the stage of red hepatisation and tended to the whole of the back on both sides, when, on account of the increasing weakness of the patient, the treatment was changed to the stimulating plan. Ammon. carb, squill, senega and digitalis were given internally, a jacket poultice on chest, and brandy, soup and milk were ordered every three hours. But the symptoms instead of gradually abating took a serious turn. The temperature rising to 105°F, the respiration counted 65, and the pulse to 150 beats per minute. I ordered wet pack to chest with water whose temperature was that of the surrounding air, namely 85°F, but as she felt chilly, I warmed the water to about 1° less than the temperature of her body. This acted marvellously; the temperature coming down to 100°, respiration to 55, and the pulse to 120; while the patient fell into a deep and refreshing

slumber. The wet pack was renewed every hour and continued for two days, so as to not allow the temperature to rise above 100°F. Hypodermic injections of quinine, ether and strychnia were used when the patient showed any signs of depression, while nourishment, with small doses of brandy, was continued all along. Resolution commenced on the second day after the wet pack, and she made a good recovery. Her convalescence was however retarded by the occurrence of the miscarriage of a dead foetus on the 15th day from the commencement of her illness. The placenta being found adherent to the uterine walls, it was removed by digital manipulation, and the cavity of the uterus was washed out with Condy's fluid, now and then. From this day her recovery was uninterrupted.

N. P. Bhattacharjee, Hindu, male student, aged 23 years, much debilitated from previous attacks of malaria was laid up with fever and cough, for which some homoeopathic medicines were taken for three days, the fever continuing in spite, a Civil Hospital Assistant was called, who treated him for two days more, but the fever instead of remitting gradually increased to 105°F, and the patient becoming delirious at night I was sent for in consultation and found him very low, delirious, tongue brown and dry, teeth covered with sordid, temperature 102·8°; pulse 120, soft, frequent and weak, respiration 45; bowels loose, passed four or five pea-soup-colored stools during day; answered questions rationally, though the mind was deranged now and then; no abnormal sounds could be detected in the chest, except that respiratory murmurs were weak all over and puerile in the left apex, cough not very troublesome, but the sputa were very tenacious.

This led me to suspect pneumonia, though the symptoms were more like those of a case of enteric fever. There was some gurgling in the right iliac fossa and a distinct rise of temperature of about 1° in the evening. The characteristic rise of temperature by two degrees towards evening was observed for two or three days. Ether, ammonia, bark, digitalis, ammon. and potass. bromide, (for delirium) with brandy and milk every three hours were ordered and continued for two or three days without any abatement of the symptoms. Even when the characteristic rusty-colored sputa made its appearance, and a jacket poultice was ordered, no physical signs of pneumonia were detectable; the pulse and respiration ratio gradually became more and more altered without, however, any very appreciable increase in the temperature, which continued between 102·5° in the morning and 103·5° in the evening, and the patient was gradually sinking. The respiration increasing to 62 and pulse to 150 per minute. I ordered wet pack on the chest, which acted very much the same as it did in the previous case by reducing the fever to 99·2, respiration to 50, and the pulse to 120. This treatment was continued for two days with occasional hypodermic injections of quinine, ether, and strychnia till resolution commenced and the fever left him entirely. Slight delirium, however, remained for a week more and an initial bed-sore being found on the sacrum careful nursing and other suitable measures were taken, under which the patient made a full recovery by the end of the 18th day.

Remarks.—From these brief notes regarding the onset, progress and termination of both these cases, it is evident that the first case was one of acute lobar pneumonia oc-

curring as a complication of an attack of influenza, and the second a case of enteric fever complicated with an intercurrent attack of pneumonia with typhoid symptoms. The absence of any abnormal sounds with the exception of the very weak respiratory murmur and puerile breathing was very peculiar. It was the alteration of the pulse and respiration ratio only that made me suspect pneumonia, which was confirmed by the characteristic rusty sputa appearing at an advanced stage. The chest was examined every day with more than ordinary care, yet no characteristic sounds of pneumonia were detected anywhere. It may be that a very limited and deep seated portion of the inner surfaces of one or both lungs was affected with the disease, and that a very large and superficial healthy surface prevented the sounds being heard distinctly; but the very weak and almost inaudible respiratory murmurs were very characteristic in this case. As the percussion note was clear all over, there was no reason to suspect any pleuritic effusion or any other media to hinder sounds from being conducted externally, nor were the symptoms of that variety called hypostatic pneumonia. Weak breath-sounds, such as are mentioned in works of medicine, are generally found in the beginning of the first stage of acute labor pneumonia and in what is called latent pneumonia occurring in weak and debilitated subjects, but the rusty sputa is generally absent in the latent form of the disease.

It is only in the typhoid variety of the disease that the absence is possible of all physical signs, save the weak breath-sounds that were heard in this case, and the other symptoms, such as sordes in teeth, dry, brown and tremulous tongue and low muttering delirium led me to diagnose this case as that of typhoid pneumonia.

As regards treatment, standard medical works describe three methods, viz., the expectant, the antiphlogistic and the stimulating method. As far as my limited experience goes, the first method is only applicable in those cases where the temperature ranges between 102° and 103°F, the pulse between 100 and 120 and the respiration between 30 and 40. The second method, in my opinion, is not generally applicable to the people of this country, except in a very few robust and strong persons, not even in the very beginning of the attack, for only when given early in selected cases can antimony, so much extolled in inflammation of the lungs, shorten the duration of the disease and mitigate the after-symptoms. The last method is the only one which is generally applicable in all cases of pneumonia in Bengal, but as the affection runs its course like, a specific fever, which it probably is, its course cannot be curtailed by any method of treatment, except the application of cold bath, cold sponging and wet pack, but unfortunately this method of treatment is not as much in vogue here as it ought to be. The tendency of pneumonia, as we know, is to kill firstly by weakening the heart and stopping the pulse, and secondly by the stoppage of respiration. Where there is a tendency towards death by the first method careful and judicious administration of alcohol and other stimulants often saves the patient, but when there is a tendency to stoppage of respiration, stimulants do harm instead of good. I do not find any good or rational plan of treatment of such cases mentioned in any works in medicine. Some advocate bleeding, which is

unsuitable to the people of this country just as is the antiphlogistic method of treatment mentioned above. Dr. FOTHERGILL's recommendation of a hot jacket-position on the chest, which he calls "bleeding a man in his own vessels," is sometimes very efficacious, by unloading the right heart and thus improving the respiratory embarrassment, and it is only here that the so extolled routine plan of encasing a patient's chest in a jacket-poultice finds its best and suitable application, otherwise it is useless or rather harmful in pneumonia, as patients always try to tear them off and become more restless under their use. In my younger days I have lost more than one case from pure failure of respiration, and I now regret that I did not then treat such cases with external application of cold which, as I now understand, would have saved them. Cold bath, sponging or wet-sheet packing, which last is the most convenient way of applying cold (especially in private practice) saves the patient not only in cases of failure of respiration, but as well as in cases of failure of pulse by strengthening the heart, calming the respiratory centres and the whole of the nervous system, increasing the action of the so-called phagocytes, and enabling the blood cells to absorb more oxygen, simply by abstraction of heat. It is true that cold application cannot save a patient when the respiration fails from want of sufficient lung surface to carry on the process (i.e., when both lungs become wholly or nearly wholly consolidated) but such cases are rare, as the failure of respiration is generally due to failure of the respiratory centres by virtue of the heat of the blood and the patient's deficient vitality. A patient with 60 respirations per minute is rarely saved by any other method of treatment than cold application. Limited as my experience is, yet I would recommend this method of treatment in all serious cases of pneumonia, provided stimulants, suitable to the requirements of each case, are also administered.

In conclusion, I would like to be enlightened by any of the readers of the *Record* as to whether a specific fever with a definite course to run can, when occurring as an intercurrent disease to another specific fever, so modify its course as to bring on its crisis earlier than may usually be expected, as exemplified by the second case above described.

PERMANGANATE OF POTASH ANTIDOTES A CASE OF POISON BY A VERY LARGE DOSE OF OPIUM.

By S. M. CHINNIAH, C.M.S.
Medical Officer, Nandura.

HAVING read in the *Indian Medical Record* of the experiments made with permanganate of potash in poisoning by opium or its alkaloids, I send you the following notes of a case I had the opportunity of treating:—

At 6 P.M. of the 22nd July 1895, while about to leave the dispensary to visit my out-patients, Mr. MARWATHI PEEBAJEE, Assistant Permanent Way Inspector G. I. P. Railway, Nandura, came running towards me and begged me to immediately see his only son, aged about 2 years, who had accidentally got hold of the opium box in his house and swallowed the smaller of the two lumps that

the tin box contained. This occurred at about 3 or 4 a.m. while the mother was absent from the house on some business.

Hastening to the railway station where he lived—a distance of about 500 yards from my dispensary—I found the boy fully narcotized and giving him *vin. ipecac 3ii (raw)* directed the parents to remove him to the hospital without any further delay. Sending them off to the dispensary, I took charge of the opium tin, and on enquiry at the opium vendor's shop elicited that on the previous day the father of the boy had purchased from the shop four annas worth of opium, weighing 6 mashes (90 grains *avoirdupois*); now as the opium left in the tin weighed 70 grains, it was clear that the boy had taken a ball of 20 grains, a very large dose I think, and a powerfully lethal one.

On arrival at the dispensary at 7 p.m. I again administered *ipeocacuanha vin. 5ii* and plenty of warm water to encourage emesis, but with very unsatisfactory results; for the boy would not vomit at all. At 9 p.m. this line of treatment appearing worse than hopeless, I dissolved 8 grains of potassium permanganate in one ounce of water and administered a teaspoonful every ten minutes, till midnight, when, the first 8 grains being used up, I had to prepare another quantity of 8 grains, and gave it in the same dose, every twenty minutes. A decided change set in by 2 a.m., when the stupor was replaced by wakefulness and the narcotic symptoms gradually giving way consciousness returned at 4 a.m., when the boy was able to recognise faces and correctly reply to questions put to him, though still unable to stand on his legs. The permanganate was now discontinued, and at 6 a.m. the boy was out of danger, able to stand and speak well. I detained him all that day and sent him home in the evening. In all the boy had only 16 grains of the permanganate of potash to bring him to complete recovery.

The second quantity of the mixture of 8 grains of the permanganate was mixed with (20) twenty minims of *acid sulph dil.*, as recommended by Dr. WILLIAM MOORE of New York, in the *Record*, dated 16th July 1894; but this mixture appeared to have had an irritating effect on the fauces, making the boy cough every time the mixture was given. Spts. ammon. aromat. in 10-drop doses in water removed the unpleasant cough symptoms, and he is quite well now.

Remarks.—Considering the large quantity of opium (20 grs.) swallowed in this case, and the recovery made from the comparatively small amount of the permanganate of potash (*i.e.* 16 grs.) used, I think the case worth noticing. I see from the reports in the *Record* that Dr. MOORE of New York on one occasion used 3 grains of the potash for 2 grs. of *morphia*, and on another occasion 4 grs. of the permanganate for 3 grs. of *morphia*. Dr. BRICARD used 16 grs. of permanganate of potash for 4 grs. of opium; whereas this case required 16 grs. of permanganate of potash for 20 grs. of opium. Thus it will be seen that the administration of the antidote materially differs in individual cases. A standard to go by would, I think, answer better.

By laying down the proportionate quantity of the permanganate of potash required to neutralize the poisonous effects of a proportionate quantity of the poison, *vis.*, opium, *morphia*, &c., I am sure our big heads will draw out a

line, which is so important for India and its children (I mean opium-eating children) who succumb to this dreadful poison year by year owing to the gross neglect or culpable carelessness of their parents in keeping their opium tins, boxes, &c., for, once these vessels get into the hands of a child, who is accustomed, daily, to small doses of opium, it thereby becomes accustomed to its bitter taste, and will surely swallow larger quantities of the drug than is safe.

Surely the profession throughout India ought to be indebted to Dr. WILLIAM MOORE of New York for his valuable discovery of an antidote to a very common but powerful poison.

PUERPERAL PHLEBITIS IN LEFT THIGH TERMINATING IN ABSCESS, COMMENCING 20 DAYS AFTER CONFINEMENT.

By C. A. THOMMAN, C.M.S.

Civil Dispensary, Tellicherry.

The object of reporting this case is to show the lateness of the evidently puerperal lesion.

Mrs. B., Eurasian, aged 24 years, in comfortable circumstances, had sudden high fever (105°F) twenty days after her fifth confinement; her confinements are annual, but natural and attended to by a diplomaed midwife. She is of a sanguine and susceptible temperament, and suffers from intermittent episcleritis* since her fourth confinement, and now (seven months after recovery from the disease under report) she has had a small line of opacity at the outer margin of her right cornea. Her lochia continues for the usual period, and she gets her catamenial flux on the 28th day after confinement, even during the illness under report. The inflammatory symptoms commenced on the 3rd day of the fever by pain and redness on the inner side and upper part of the left thigh, and phlebitis was diagnosed on the 7th day while an abscess which formed above the inner side of knee on the 15th day, was opened as soon as possible and healed in a few days; the pain now extended to the calf, the fever lasted a month with remissions. Soon after the subsidence of the fever she was able to move about under a tonic and supporting plan of treatment, but the induration of the vein persisted for about three months.

Elephantiasis is common in these parts and commences in a similar way but the fever disappears in three days and a general swelling descending on to the foot is the only lesion left.

* A term used by a consultant for a mago-like projection, covered over by congested conjunctiva, in the white of each eye, appearing and disappearing at intervals of a few weeks and for which he prescribed a course of "Syrup Ferri Iodid."

A CASE OF COBRA-BITE TREATED BY FREE EXCISION AND THE APPLICATION OF PURE CARBOLIC ACID: RECOVERY.

By EDWARD BALM, C.M.S.

District Surgeon, Farbani.

MYBOOB KHAN, *et.* 36, was bitten by a full-sized cobra in the calf of his leg when he was at work in the field. He was brought to my hospital within 10 minutes of the occurrence. He complained of a tingling pain

only at the seat of the two bites. The bites were freely excised and bleeding was promoted; the parts were then touched with pure carbolic acid and dressed with carbolic oil. Internally, 10 minims of liquor aminonia were given every hour. The patient was kept under observation for five hours, and he had no unpleasant symptoms whatever.

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BELLADONNA IN SYNOVITIS.

By ASSISTANT SURGEON A. BEALE, I. M. S.

In Medical charge R. I. M. S. "Clina."

I ADMITTED into the ship's hospital on the 15th May 1895 a stoker, suffering from acute synovitis affecting the right knee joint, which came on ideopathically, as special enquiry regarding any injury elicited no response. The duration of disease in its acute stage, and the period passed before resolution commenced, was 28 days; the symptoms were heat, pain and swelling of joint, which increased daily, till it was twice the size of its fellow of the opposite side; the sac was fully distended and appeared as if about to suppurate. The absorption of serous fluid occupied about 15 days, some thickening and tenderness remaining, which disappeared after another fortnight's treatment. Locomotion was strictly interdicted, except for natural purposes only. Glycerine of belladonna, iodine, liniment of belladonna, hot fomentation, unguent hydrargyri, and the elastic bandage, when inflammation had sufficiently subsided to allow of its use, were each applied in turn.

Potassii iodidi, tincture belladonna, and spt. ammon arom. were freely exhibited internally, with an occasional dose of calomel. This case ran through rather a protracted course, about two months elapsing between date of admission and discharge. I was hopeful that the treatment with the belladonna preparations would have acted more speedily and as efficiently as in a previous case, which I had had under my care, in which the symptoms were just as marked, and due to injury, but 10 days saw the disease in this instance run its course. The liniment of belladonna, and nothing more, was found sufficient to accomplish the needful here; it was rubbed gently into the knee thrice daily, with very good effect indeed. I am not discouraged; for perhaps, had I not used belladonna, the case under report would have run a much longer course. I have seen marked, and fairly long standing sacitis in a boy with all its accompanying discomforts, considerably and quickly reduced by means of the glycerine of belladonna applied over abdomen—much to patient's relief and satisfaction.

TRIONAL IN INTERNAL DISEASES.

SPITZER, who watched the trial of this hypnotic at *Drasche's* Clinic, where it was given in doses of from 1 to 2 grammes, (i.e., 15 to 31 grains) draws the following conclusions about trional (1). As useful an hypnotic in heart and lung cases as it is in various forms of psychoses. (2) Quickly induces a normal sleep, which *ipse* reasserts the following night, sometimes however the patient remains stupid with sleep for the whole of the next day. (3) Circulation and respiration not harmed in any way. (4) Retching and vomiting on waking occurred in one or two isolated instances (5) The effects closely resembled those of morphine, to which however it (trional) was superior in insomnia resulting from the pain, &c. of intercostal neuralgia, cancer, rhealgia, sciatica and tabes.

OUR PICTURE GALLERY.

SURGEON MAJOR-GENERAL JOHN PINKERTON

M.D. (GLAS.), L.R.C.S. (EDIN.), F. B. U.,

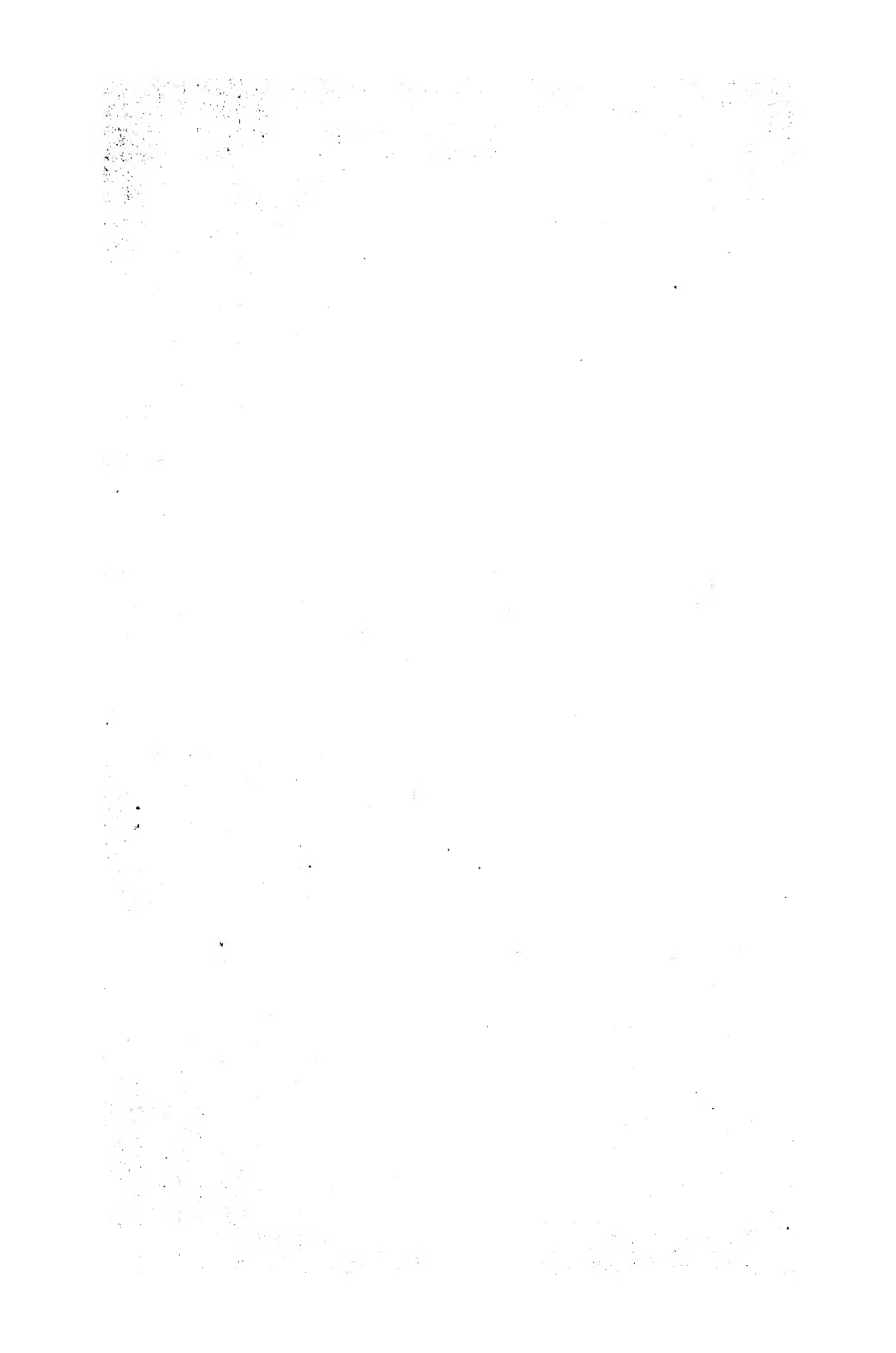
F. F. P. & S. (GLAS.), I.M.S.

Honorary Physician to the Queen.

THE following biography should point a strong moral to the junior members of the I. M. S., and to all the members alike of the medical services, whether native or European, as this life was a steady and progressive one of hard, practical and administrative work. Briefly, JOHN PINKERTON who was born at Glasgow in March 1833, was a son of J. PINKERTON, Esq., of Hogganfield, and was educated at the Glasgow University: After obtaining the licence of the R.C.S. (Edin.) he graduated in the medical section in 1856 but during his student days he took first-class prizes twice and was a successful competitor for a medical commission at the second examination held by the Honorable East India Company. His first commission is dated August 4th 1855, when he left for India via the Cape of Good Hope, reaching Bombay in March 1856. Facing the authorities on his arrival, he resolved to resign his commission; but was ordered to Aden, where he served first with the 86th Regiment, then with the 18th Bombay Infantry, and acted as Civil Surgeon till towards the end of 1856 when, being lent to the Indian Navy, he accompanied the force under SIR JAMES OUTRAM, sailing up the Persian Gulf in the *Tigra* and was present when *Kharap* was formally given up to Persia. The *Tigra*, which collided with a large ship, during a storm, was sent to Bombay to refit early in 1858, when he volunteered for active service in Central India but was informed that he would first have to complete his two years with the Navy. In 1860 he was appointed Civil Surgeon and Registrar at Broach, where he had charge of the European sailors and some thousands of of native workmen who were engaged in constructing the great iron bridge, over the Nerbudda. On passing the test-examination in Hindustani in 1862, he was appointed Superintendent of Vaccination in Sind, where for the next five years he worked most arduously for (as he states privately) nearly 10 hours a day, almost doubling the number of the vaccinated in this Province—the numbers rising from 42,282 in 1862 to 67,941 in 1869.—and affording a great check to variola, which raged in the district owing to the prevalence of inoculation and its terrible after-results. He passed the test in the Shodhi language and received the reward of Rs. 500 in 1868 when the Bombay Government appointed him Superintendent-General of Vaccination—in return for his work in that direction—and created him a J.P. of the territory while the Syndicate elected him a Fellow of the Bombay University. During the following year the city of Bombay authorities wishing to make vaccination compulsory within the city boundaries, his advice was sought and his aid requested to draft a Bill which, a few years later, was passed by the Legislature under the short title of Act I. of 1877, which provided that every child should be vaccinated within 6 months of birth, and *de facto* this self-same Act was the prototype of the more recent Indian Vaccination Statutes. During this year Dr. BLANK arrived at Bombay with a supply of animal vaccine lymph with which he



Vincent J.
John Puckerton



inoculated a belfer in the presence of DR. PINKERTON and the late Assistant Surgeon ANANTA CHANDROBA; the success attending this experiment gave impetus to the introduction of animal vaccine lymph into Bombay, and beginning from this period cow lymph completely replaced the use of human lymph in the city of Bombay, but vaccination direct from the calf was practised in some large cities, such as Poona and Karachi. Strange as it may appear the Hindus of Karachi objected at first to cow-lymph, whereas those of other cities at once grasped the idea which they hailed as a great improvement, and infinitely preferred it to humanised lymph. During the year 1870 DR. PINKERTON went on Government tour through Upper and Lower Bengal and the Madras Presidency so that he might personally ascertain how vaccination was carried out in various parts of India with the view to draw up a scheme for the re-organization of the Vaccination Department of the Bombay Presidency. This scheme, which has been entitled the Bombay System of Vaccination, was duly laid before the Government, in 1871. This collection of regulations so extended and improved the existent powers controlling vaccination as to give a great impetus to the increased production of this important branch of sanitary reform by greatly increasing the number of public vaccinators. The result was an enormous increase in those annually vaccinated. In 1869 the number of those primarily vaccinated was 464,667, while in 1890 it reached 885,260. Under DR. PINKERTON'S suggestion the Sanitary and Vaccination departments were amalgamated and placed under the supervision of the Sanitary Commissioner. His contemporary, the Editor of the *Times of India* styles him the father of vaccination in Western India. He was promoted to Surgeon-Major in 1872. In 1876 DR. PINKERTON came to Bombay as physician to the European General Hospital, which at that period was located in wooden sheds on the old fort walls; but in 1877 it was removed to another insanitary quarter, the converted Artillery barracks of Fort George. For the next six years he held medical charge of this hospital, where he won golden opinions from all his patients, both needy and rich. It was during this term of office that he performed (1879) the first successful operation of ovariectomy (on a European woman) in India which case he communicated, with some others, to the *Lancet* in the form of "fugitive articles" (his own name for them) in the same year. His "*Remarks on Enteric Fever among my patients in Bombay*," published that same year, contained expressive confirmatory of the fact that typhoid was one of the fevers to be contended with in India, though, at that time, such a suggestion was a novel one still all subsequent literature has served only to reiterate his experience. During his residence in Bombay city, he manifested the greatest interest in the University of which he was already a Fellow. He held the post of Syndic to this institution to which he was also Examiner in Medicine, and twice Dean of the Medical Faculty. He joined the Municipal Corporation and always proved himself a strong supporter of the Scottish Orphanage School at *Mahim*. While he held the post of Hospital Physician, the Government of Bombay erected St. George's Hospital, a magnificent building with all the latest sanitary and medical improvements for the treatment of both European and Eurasian patients, and situated near

the site of the old Artillery Barracks. In 1880 DR. PINKERTON and Surgeon-Major HATCH collected careful notes of fever cases with the results detailed above, and at the request of Surgeon-General BEATHY a summary of nine cases of enteric fever was also written out in a paper that was afterwards published as an appendix to the "Report on the administration of Civil Hospitals in 1880." Taking an active part in corporation and charitable institutions as a member of the Municipal Council for Bombay for some years and part of the time on the District Committee for Karachi, he was (1882) made President of the Medical and Physical Society of Bombay, as well as a member of the Managing Committee of the Bombay branch of the Royal Asiatic Society. That same year he was appointed Deputy Surgeon-General to the Sindh Division, with full control over both Civil and Military duties; and while P. M. O. of that province for five years, many of the hospitals in the district underwent marked improvements in every respect, and a few new dispensaries were opened: thus officially proving his administrative capacities. On the retirement of Sir WILLIAM MOORE, K.C.I.E., in 1883, he was appointed Surgeon-Major-General with the Government of Bombay, which status he held for the full (allotted) term of five years. During this period of his long service, at the instigation and under the active co-operation of Surgeon-General PINKERTON, the Government greatly enlarged the scope of the public medical institutions in this great Presidency in which the undermentioned establishments remain as so many lasting memorials of this able officer's acumen and zeal in sanitary administration in this important part of our Indian possessions *via.*, Bai Mothibai Hospital for lying-in women; the Sir Din Shaw Manockjee Petit Hospital for Women and Children; the Dwarkadas Lallabhai Dispensary; the Amabhai Bhownuggree Home for native nurses; the Allbless Hospital; and the Franjee Petit Laboratory; while among miscellaneous institutions may be mentioned the new European General Hospital at Aden; the Ripon Hospital (Ahmednugger); the Lord Harris Hospital at Nassick; and an increase of some 30 new dispensaries. Scanning the above list one may readily see the grandeur and immensity of the work set in motion by this distinguished officer, who, when there was disaffection among medical officers owing to the usual leave being stopped on account of numerical weakness in the service due to the prevalence of famine and the breaking out of the Afghan War, tried to obviate the difficulty in one of two ways:—(1) By a careful arrangement of relief, so as to give every officer and subordinate the leave he had earned, when possible to grant it; (2) to improve the buildings of civil hospitals and dispensaries as far as possible. He received a distinguished service reward and was the first President of the Bombay branch of the British Medical Association; while in 1893 LORD HARRIS nominated him member of the Bombay Legislative Council—a distinction that has been held by only three members of the I. M. S., and this at long intervals of time, on retiring. From Bombay in 1893 he bore with him the good wishes of many medical officers who assembled to give him a farewell dinner, at which he received the thanks and good wishes of all and in bidding them adieu, made the following remarks which were calculated to endear him to India's suffering poor for all time:—"India has been kind to me. I have enjoyed excellent health, and shall leave this country with many kindly thoughts of this sunny land and its people." On reaching England he was appointed Honorary Physician to H. I. M. Queen Victoria and Fellow of the Faculty of Physicians and Surgeons, Glasgow. In a recent letter he says that he is still in excellent health, despite the almost Arctic winter just passed in Enland. He expresses himself most cheerfully that he is interesting himself strongly in the future welfare of his *alma mater*. May he continue to do so for many long years more is the personal wish of each of his many friends.

THE Indian Medical Record.

1st September, 1895.

SIR WILLIAM ROBERTS M.D., F.R.S., ON THE
GENERAL FEATURES AND THE MEDICAL
EFFECTS OF THE OPIUM HABIT IN INDIA,
AND THE RECKLESSNESS OF THE
EVIDENCE ON WHICH HIS CON-
CLUSIONS ARE BASED.

IV.

Opium-smoking in India.—The smoking of opium in the form of *madak* and *chandu* as compound with the habit of eating opium in India is comparatively modern. The latter habit is coeval with opium cultivation, the former, an exotic, is not traceable to a period anterior to the beginning of the present century. Whatever excuses have been framed to palliate the habit of opium-eating—and as we have seen already they are many and various—no one has come forward to defend or excuse the opium-smoking habit. It is well to keep this in view in considering this habit, as it is the root and origin of the whole antiopium agitation. It was the scenes of domestic misery, personal depravity and debauchery witnessed in the opium-smoking dens of China that first attracted attention; and as the evil spread, and became national in that unhappy country, observers turned their attention to India, where they found the smoking habit taking firm root and spreading rapidly under the fostering care of a civilized Christian Government. The appointment of a Royal Commission followed the investigations of which were limited to India, and to the consideration of the habit of opium-eating both side issues of the greater question of opium-smoking in China and India. In China and the Straits, opium is usually smoked in the concentrated form of *chandu*. The whole of the export traffic in opium, or what is, departmentally known as "provision opium," may be said to be consumed in the opium dens of China and the Far East. In section IV of their Report, the Commissioners tell us that—"The quantity of both Bengal and Malwa opium exported to China and the Far East is thus far larger than that consumed in India, to which it bears the proportion of 12 to 1." The energies therefore of the Royal Commissioners were really concentrated on hearing and taking evidence in regard to a fractional part ($\frac{1}{12}$) of the great opium traffic. That fraction indeed—if we exclude opium-smoking in India—is so minute in itself, that it has never attracted much attention; and because it is not a public but a private and secret habit, it does not propagate itself as opium-smoking does. It is far otherwise with the habit of opium-smoking. It demands for its supply (including India) about fourteen times more opium, and yields fourteen times more revenue to the Indian exchequer than opium-eating does. It is a social and public vice, hence more calculated to attract victims and propagate itself than the nocturnal and less pernicious habit of opium-eating. It will thus be seen that the real question which the Opium Com-

mission should have considered has received very little attention, while the fractional portion— $\frac{1}{12}$ of the whole question—has been evidenced, defended, palliated, and excused by a variety of devices and curiously conflicting theories, till the real issue—opium-smoking—has been lost sight of. It does not require great penetration on the part of the reader to understand how this has come about. It was no accident. When the Commission was appointed, it was intended that thus it should be. We must therefore bring the reader back to first principles on this subject, and remind him that it was chiefly the opium-smoking habit in China, in the Far East, and in India that drew attention to the traffic, and revealed the sensual purposes for which it is so largely used.

The pernicious nature of the habit of smoking opium was early recognised in China and India. In China the habit is traceable to as early as the end of the 17th century, and "by the year 1729 it had grown so common in some parts of China, that it drew down an imperial edict severely prohibiting opium-smoking shops and the sale of opium for smoking purposes." In the year 1769 an edict, which was issued by the Governor of Canton directly prohibited the import of opium. Sir J. B. LYALL one of the Commissioners, in his Memorandum II attached to the Commissioners' Report says of this edict:—"It is a very strong denunciation of the opium habit as morally and physically degrading, and as ruinously expensive." The report informs us also that "in the early Bengal regulations referring to opium, the use of *madak* was forbidden," and in the North-West Provinces and Oudh "the sale of *madak* was prohibited until 1863." Thus we see that the early legislators of China and India—heathen and Christian—saw and endeavoured to arrest the evils due to opium-smoking. One of the two Hindus on the Royal Commission—HORIDAS VEHARIDAN—says of this habit "The practice of opium-smoking is generally condemned; but nothing short of its abolition by law will, in my humble opinion, put an end to it. It is most desirable that it should be made penal." Even Dr. CROMBIE in one of his better moments said:—"I think there is a consensus of opinion among all, including opium-smokers themselves, that the *chandu* and *marlak* manufacture should be abolished." The "Heathen Chinese," the Imperial and Local Governments of China, denounce the habit in the strongest terms they can employ; the early regulators of the opium traffic in Bengal; the Hindu Commissioner of the Royal Commission on opium, the Government of India, and all the local governments, except Madras, acknowledge the unmitigated evils of the habit, and condemn it. But a Royal Commission composed of educated civilized Christian Englishmen—with one honorable exception—takes refuge under the amazing opinion of the medical experts, who unblushingly tell us—after hearing the unanimous testimony of all India, Governments and peoples in condemnation of the habit: "That it cannot be said to be adequately proved that moderate opium-smoking, taken by itself and apart from disease or semi-starvation has any prejudicial effect on health." The Commissioners however admit because they could not deny it, that "On the other hand it was clearly shown before that native public opinion generally condemns the habit as disgraceful."

and this opinion is shared by the great majority of European witnesses official and private—judges, medical practitioners." Yet Sir WILLIAM BURNES, who should have been the first to recognise this universal condemnation of the habit by heathens and Christians, officials and non-officials, medical officials and non-official medical practitioners—plays with words and tickles the fancy of the public with the verdict of "Guilty but not proven." The Blue Book on the Consumption of opium in India, presented to both Houses of Parliament in 1892 gives ample evidence of how local governments in India regarded this deleterious and degrading habit; and on the evidence laid before it from local governments the Government of India concluded as follows:—"Nevertheless we have decided that the policy instituted in the Punjab (total prohibition of smoking shops) is, as the whole, the right one to follow, or at least that it should be given a trial on a large scale." Were any further proofs necessary to convict the medical expert of clinging tenaciously to preconceived theories after their groundlessness had been exposed, their utility denied, and their claim to scientific recognition exploded, we could bring them forward, but that is unnecessary.

It was foreseen from the beginning that local governments would endeavour to evade the orders of the Government of India, prohibiting the consumption of opium on the premises. We are revealing no secret when we state that the orders in question found no favor with the governments of Bombay and Bengal, and that consequently the executive winked at the continuance of the habit under the form of separate dens removed a few feet from the opium-selling shop. In Bengal we affirm that the smoking dens in most places are just as they were, and show no semblance even of complying with the orders of the Government of India. India is the country of evasion, it is the most frequent and most effective weapon employed in our law courts—breaking the law in spirit, but evading it in the letter. It may be imagined then, what potency lay behind the governments of Bombay and Bengal when this popular force, backed by the effective omnipresent machinery of a European and native executive,—was set agoing to neutralise the orders of the Government of India on opium-smoking. These orders in Bengal are a dead-letter, and that for three reasons:—(1) the permission now given to manufacture *madak* and *chandru* for smoking purposes outside the opium-selling shops; (2) the large quantity of opium, five tolas or 990 grains, which can be purchased and possessed, by one person without infringing the present law; (3) the indifference, even marked aversion, of the local authorities to carry into execution the spirit as well as the letter of the present law. Until these defects in the law and its administration are remedied the opium-smoking habit will go on increasing as before; indeed, if we are not misinformed, the habit will spread more rapidly though less observably than under the old rules of public and unrestricted consumption. HOBIDAS VEHARIAS, one of the Hindu members of the Commission, refers to this absurd state of the law as follows:—"There were some cases before the Presidency Magistrate of Bombay, where the accused were acquitted only because there were in a house say eight persons, and the quantity of opium used by them for smoking did not exceed the

total of what each of them was allowed, by law, to possess. This is in my view plainly ridiculous. Under the present state of the law, the opium-smokers can indulge in their vicious practice with impunity.

To remove this difficulty a strict law should be made prohibiting opium smoking in any form and under any circumstances, and thus frustrating the attempts of lovers of opium-smoking as well as those interested in the opium trade to escape from its clutches." If the government of India is desirous of maintaining its rightful ascendancy and control over the local Governments of the Empire, it must put forth a speedy and strenuous effort to check the utter disregard of Imperial orders now so shamefully exhibited in the provinces of Bengal and Bombay regarding the opium-smoking regulations. And if the Imperial Government is not to be charged with manifest hesitating and lack of moral rectitude, it must modify the law, reduce the quantity of opium saleable to any one individual, and enact that the manufacture or preparation of *madak* and *chandru* in any form, in public or private, for smoking purposes be absolutely prohibited everywhere throughout its dominions. The Government of India has already said that "the policy initiated in the Punjab (closure of *madak* and *chandru* shops) is, on the whole, the right one to follow." Let the Government therefore shew by efficient legislative enactments that it has the courage of its convictions, and insist that these enactments shall be carried out in spirit and letter by the local governments concerned, so that they cannot and dare not infringe the law. When this is done, we shall begin to believe in the good intentions of the Government of India on this subject; for until it does so, every right-thinking person must hesitate to credit the Imperial Government with any serious desire to arrest the spread of the opium smoking vice within its dominions.

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VALVE OF MEDICAL COMBINATION.

It must be a source of gratification to all interested in the progress and social advancement of our profession to find how vigorously its members are grappling on to the fact of there being much strength in united action. Until within very recent years medical men appeared to have had a vague belief—practically a disbelief—in the good old dictum that unity is strength. They formed indeed a very disunited brotherhood. They have all, naturally enough, been one in the wish that the members of our profession be accorded every reasonable recognition and advantage; but they did nothing in common to bring about the fulfilment of that wish. On the other hand, as times have been growing harder and harder, there have come amongst us an increasing number of those who are willing and prepared to scatter to the four winds all the time-honored ethics which guarded the dignity of our calling; who are perfectly indifferent as to whether governing councils and bodies recognise them as belonging to the true fold or not; and whose sordid principles render them incapable of taking any other but a financial measure of the success of science. This war and disunion in our own camp having of late become seriously undermining to our constitution, the profession has come to see the necessity of rousing itself to

self-defence, and to find that the best security lies in determined and powerful union and association of its members against those unscrupulous ones who would sell their birthright for a mess of pottage. Medical unions and associations have now become the order of the day; and they have been actively engaged in protecting the interests of the profession, and in obtaining for its members many advantages and concessions which one or the other kept from them. The extent to which the poor are being robbed under the guise of extended charity by the establishment of pay wards; the disgraceful way in which medical men are being sweated, and allow themselves to be sweated by medical aid associations; the many instances in which women of ill fame and their vile abettors have involved reputable practitioners in most serious law suits; all these and a host of other schemes and ways which have pressed hard on general practitioners in particular have been, from time to time, put before our readers, and point to the necessity for medical organisation, and that the Incorporated Medical Practitioners' Association of London did not start a day too soon on its useful and active operations. Though this Association is but in its childhood, it has evinced vigour to raise the expectation that it will soon prove to be a power in the cause of general practitioners; and it is to be congratulated on its achievements and successes. These may be judged of from the report of the work done by the Association as detailed by DR. GEORGE J. EADY, in his valedictory address on returning from the office of President of the Association. Firstly, the Association is allowed, by several first-class offices for life insurance and for insurance against fire and accident, a large percentage off their usual terms. This commission being divided between the insuring member and the Association benefits both member and Association. Secondly, it has a department for the collection of long standing dues to practitioners. DR. EADY however recommends that a practitioner send us his bill for medical attendance immediately after cessation of attendance, and that fees be not allowed to accumulate. The Association has an Arbitration Department for the settlement of disputes between medical men. This saves the parties concerned from the publicity, inconveniences, delays, and large expenses, that lawsuits generally involve. The Association hopes to take the necessary steps for having the powers of the General Medical Council increased, so that that body may be empowered to cope with such evils as unqualified practice, practising after removal from the register, &c. A memorial has been addressed to the Council on the degrading effects of medical-aid and such like Associations, by which medical officers are over-worked and underpaid, while the profits of their labors go to the company engaging them. A Committee of the Association has been engaged in considering the matter of medical clubs for affording medical relief to the working classes. DR. EADY considers a medical club as the only way in which the working classes can satisfactorily procure medical assistance; but those who can afford a proper fee should not be admitted to the benefits of the club; and he thinks that the best way of removing the evils arising from the principles on which

medical clubs are now worked is for medical men to start and manage such clubs themselves, being principals, instead of subcontractors, this has been the suggestion of the Club Committee of the Incorporated Medical Practitioners Association. With regard to the management of hospitals, and the way in which they are thrown open to the public promiscuously, DR. EADY rightly deprecates the competition among the numerous hospitals to make their attendance lists as large as possible to favor their appeals for subscriptions; and he thinks moreover that there should be fewer special hospitals, and that these classes of cases should be treated at the special departments of the large general hospitals, thus affording students and future practitioners more extended means of acquiring knowledge in particular classes of cases. The Association devoted several meetings to the consideration of the pay wards system, and is of opinion that it is an improper application of hospital funds, and only needs a united and determined stand of the profession against it to have the system dropped.

From the foregoing it will be seen that the Association has been doing much in the interests of the profession. There appears unfortunately to be a tendency to multiply such Associations. Except for very good reasons, it is far better for the profession to be members of one large and powerful organization than for it to split itself up into small bodies working independently of each other. Each of such associations may do a certain amount of good, but their power and authority will not be considered sufficient by the State in any important representations they may make. What is required is one general union, and not local unions of the profession. We must concentrate our forces, and not scatter them more than special circumstances and considerations demand.

In India the profession has special and almost unique difficulties to encounter. There is much to be trampled down and much to be broken through, and nothing will come to us without agitation. That agitation to be productive of good must be strong, persistent, and determined; but it cannot be any of these except we *associate* and form a powerful band. We need not enumerate the many ways in which the private practitioners here are handicapped. The severe blows that officialdom levels at the private practitioner in India are unknown in any other country, and it requires a strong and representative body to voice these grievances in order that they may be minimised or altogether removed. There are matters too of great concern to the profession in general that demand consideration; but we must all speak with one voice. There is a message which we would wish to reach all of brethren in India; it is briefly this—*Associate*; and we hope that each and all of those whom it may reach will not fail to act upon the advice.

In his opening address at the annual meeting of the British Medical Association, London, Sir J. Russell Reynolds, drew special attention to the most striking fact of modern physiological, and therapeutical research—the power of living micro-organisms in the conservation of health, and the prevention and cure of diseases.

COMMENTS AND NEWS.

CELLULAR THERAPY AND THE SIGNIFICANCE AND MANAGEMENT OF FEVER IN CHILDREN.

CONSIDERING the pathology of fever and the close relationship of the morbid changes to each other, Dr. WILLIAM JACOBSON concludes that, whether in the animal or the plant, heat is the result of motion or activity which constitutes life of which the ultimate unit is the cell which suffers the same cycle of changes as the whole organism. Now in young animals, though the activity of the cell is very pronounced, still the cell is not stable and any impetus will effect it; hence children are more apt to grow feverish and readily attain a higher degree of temperature than do adults. Experiment has proven that toxins result from a variety of causes: from the life and growth of micro-organisms, from the microbes of contagious or infectious diseases, from the air we breathe, the food we eat, the water we drink, and even from the natural processes of fermentation in the alimentary canal. Now as soon as these toxins enter the circulation they attack the tissues and cells, and while seeking to demolish them, irritate them into extra action for the secretion of natural antitoxin to defend themselves, and then begins a tussle for the survival of the fittest. In this struggle there is considerable loss by cell metabolism and degeneration dependent on the quantity and quality of the toxin and the resistance of the cell. The amount of energy produced by this fight for life is represented by the heat generated, and this heat is measured as 'so much fever.' Therefore fever, is the result of a conservative action of nature, and so long as its activity is maintained, the cell will still respond; but over-stimulation paralyzing it it ceases to react and losing its energy and motility it generates less heat, producing a subnormal temperature, as illustrated in the exhaustive stages of some diseases. Though he has nothing to say against the employment of antipyretics, antiseptics, disinfectants and germicides in some cases of fever, still Dr. JACOBSON thinks that the attempt to subdue fever directly merely for the sake of lowering the temperature is opposed to the laws of nature, and worse than useless in contagious diseases in which something is wanted that will neutralise the poison, kill the bacilli or other microbes by its own toxin, and rid them from the system. Viewing fever as a condition of toxæmia, he strongly advocates assisting nature to overcome the poison and remedy the fever by subcutaneous exhibition of nuclein $C_{12}H_{10}P_2O_{11}$, which being developed through the principle resident in the nucleus nucleolus &c. from the absorptive products of digestion is furnished by the leucocyte to the various cells of the body to enable them to resist attack and destruction. If the cell contain sufficient nuclein to resist the onslaught of the micro-organism, the latter is deprived of nourishment and poisoned by its own toxin. The toxic products are then naturalised by the nuclein. The cells proliferate, the circulation is increased, and there is an efflux of the polynuclear white blood-corpuscles, which carry more nuclein to reinforce the cells and enable them to neutralise the toxins and envelope and imprison the micro-organisms, which, being thus deprived of nutrition, succumb to starvation and their own toxins and are carried off and devoured by the phagocytes, which are furnished with sufficient nuclein to neutralise any remaining toxin. It follows therefore that if natural immunity is caused by enough nuclein in the body, acquired immunity may be obtained by causing an increased production of nuclein, and by directly introducing nuclein into the body. This has been proved by FREEMAN,

who vaccinated with bouillon cultivations against small-pox; by RUMPEL, who aborted typhoid by injecting the dead bacilli of blue pus; by FORD, who showed that blood was able to destroy health; by BUCHNER, who settled that the direct antitoxical action of antitoxin neither took place in vitro nor in the animal organism, although the injection of any proteid, foreign to an animal organism, did increase the antitoxic power of the blood, and KLEIN and many others have been compelled to admit that the various anti-toxins acting merely as stimuli to the chemical processes of the cells, their real therapeutic value lay in the quantity of nuclein they stimulated; the production of and the greater the increase of nuclein the more powerful the antitoxin.

WHAT OTHERS THINK OF THE OPIUM COMMISSION REPORT.

THE *New York Medical Record*, in commenting on the very favorable report of the Royal Commission on opium and of the more or less unanimous testimony of the one hundred and sixty-one official medical witnesses to the effect that "the temperate use of opium in India should be viewed in the same light as the temperate use of alcohol in England. Opium is harmful, harmless, or even beneficial according to the measure and discretion with which it is used" expresses fear that such views will do a very great deal of harm. We have no doubt but that much evil will result from this supposed good—opium. Medical officials fear nothing in India, except their official superiors, and to this fact is to be principally traced the severe responsibility they have incurred in being instrumental in the Parliamentary promulgations of ideas dangerous in the present to opium-consuming races and dangerous in the future to mankind in general. With regard to the alleged beneficial effects of opium on such of the Indian people who use the drug, our contemporary remarks that the "question whether the race would not, on the whole, be better if no opium were used, is not answered". True, and what is more to the discredit of the bulk of the medical evidence at that Commission is, that it piled up a whole host of wild assertions altogether unsupportable, and theories wholly untenable. The evils which all this medical evidence before the Opium Commission will bring about will long remain difficult or impossible to correct; and future generations will point to the "experiences" of the Indian medical ages of 1893 as the root of it all. Our contemporary concludes: "So far as Caucasians are concerned, we cannot too emphatically assert that the Commission's conclusions do not apply at all. The use of opium is a distinct evil. Its moderate use is impossible; there are practically no temperate opium users. The opium eater always wants more and continues to want more until he is physically and mentally a wreck." But India under an official autocracy is unique in many respects, and she can knock all experience to atoms in support of her own favorite schemes.

THE SANITATION OF CALCUTTA.

IN reply to a series of questions put him by BABOO NOLIN BEHARY SIBCAR, one of the members of the General Committee of the Calcutta Corporation, Dr. W. J. B. SIMPSON, the Health Officer, wrote to the effect:—(1) Science does not explain why small-pox should appear periodically in epidemic form, or why it should be most severe in any one particular year, and the last epidemic is characterised by a periodicity which manifests itself every 4 or 5 years in Calcutta. (2) Since 1889 there has been a large tendency to increase in the mortality from fevers (from 3,307 deaths in 1889 to 3,667 in 1894) which is due to defective sewerage and other permanent insanitary conditions in Calcutta. (3) There has not been a single case of typhus fever between 1891 and 1894; but there have been 25 deaths from typhoid fever in this period,

and the most of these were hospital cases. (4) The susceptibility to Bubonic plague, according to races, was Chinese, Japanese, Hindas, Malags, Jews, Paris, English. The mortality which varied from 80 to 97 per cent. is the highest known in any disorder, and the disease, though slow in travelling, has a rather short period of incubation, so that there is little or no danger of its coming by sea to Calcutta, which takes a three-weeks voyage from China—if infected vessels were carefully disinfected. (5) Once the disease did get to overcrowded and soil-polluted Calcutta, either by land or water, the people would fall an easy prey to its ravages, while quarantine would be worse than useless. (6) Until overcrowding is prevented by a Building Act and immediate and radical measures taken to purify the soil and air by non-leaky and *effective* drainage and sewerage, there is every prospect of the mortality running up to *considerably* more than it at present obtains.

THE CAUSES OF THE DISEASES OF WOMEN.

DR. CHARLES NOBLE states that there are about five causes of the diseases peculiar to women. First among these is imperfect development of the sexual organs. With this condition is associated imperfect bodily development, and neurones are particularly common in such females. Menstruation is attended with much pain, which is felt over the ovarian region for some days before the flow, or the pain is uterine (from imperfect development of that viscus) and paroxysmal until the flow appears. These conditions result from excessive school work, anemia, hard work, too early undertaken by the poor, and improper hygienic conditions. To these causes the *Medical Record* (from which we epitomize) adds infectious disease during childhood.

The second cause of diseases peculiar to women is gonorrhoea, the ravages of which are serious, leading to uterine, tubal, ovarian and peritoneal inflammations.

The third cause is septic inflammation following child birth. These sometimes prove rapidly fatal, or give rise to salpingitis, ovariitis and peritonitis, inflammation or abscess of the broad ligaments, phlebitis, &c.

The fourth is lacerations during childbirth. These lead to cystocoele, rectocoele, prolapsus uteri, &c.

The fifth is mechanical and chemical causes from constipation, errors in living and in dress, &c. The first of these leads to hemorrhoids, uterine and ovarian congestions, uterine retroversion, pelvic congestion and general deterioration of health. The others to pelvic disease and displacements of the abdominal viscera.

THE SANITARY IMPORTANCE OF CLEAN STREETS.

In spite of the assertion that there is no absolute proof that disease is caused by city dirt, FRANK P. FOSTER, M.D., points out that there is every reason to conclude that dust is a very potent factor in the increase of urban mortality, as scores of reliable authorities have proven beyond all question that many pathogenic bacteria flourish in filth and may be blown anywhere the wind listeth to start afresh their lethal ravages. Even were such not the case, the fact remains that the detritus of offal and all manner of disgusting abominations lying in the streets is pulverised by the city's heavy traffic, and the moment our windows are opened (especially in summer) the first gust of wind treats us to a meal mixed up with *silly* dust, not on the bill of fare, or, on our return from a walk in the city streets, we may carry into our houses some disgusting stuff or the starting point of some virulent epidemic, in the form of mud on our shoes or clothes. He therefore urges that clean streets being conducive to

human comfort and health and *filth* the *synonym* for disease and death, every member of the medical profession should take an active part in furthering good hygiene, and *especially* directing attention to the sanitary importance of clean streets. This *especially* as the power of the profession to influence public opinion is enormous and the power of public opinion to help or hurt public officials in their work is *still* greater.

DEAD MEN'S BROTH.

THE REV. HARRY JONES was one of those few clergy-men who took especial pains to enforce practical sanitation amongst the poor of his parish. Having in vain tried his level best to dissuade his parishioners from getting their potable water from a pump *inside* the graveyard of St. George-in-the-East (London) he hit upon the expedient of placarding the pump with the startling though really true inscription "*Dead Men's Broth.*" This had the desired effect and averted a good number of cholera casualties during that epidemic, during which, he says, there was such a panic that it is more than probable that some people were buried alive. He quotes one case where Sarah B.—alleged to be dead from cholera, was on the point of being carried off by the mortuary cart, for burial, when a neighbour obtained leave to rub the supposed corpse with mustard. This external stimulation resurrected Sarah B.—who lived for many years after. DR. JOSEPH ROGERS tells a novel mode of treating cholera in these trying times. Being called in to see a potman seemingly in *articulo mortis* and apparently hopeless, he had him turned on to his abdomen so as to lay a towel dipped in spirits down his spine. It was night and the man's sister held a candle and as soon as the doctor had placed the soaked towel on the potman's back ready to be stretched along it, the nervous girl accidentally set it alight and the blaze must have frightened away the cholera; for the man sat up and eventually recovered.

THE COATES MEMORIAL FUND.

It is very gratifying to find the subscriptions to the COATES MEMORIAL FUND have mounted up to the decent figure of Rs. 4,000. The Treasurer to the fund has been most energetic in canvassing the local profession of Calcutta and succeeded in raising about 2,000 rupees from our brethren in this city. The bulk of the balance has come from Indian gentlemen outside our profession, while Rs. 1,500 of the whole amount has been generously donated by H. H. the Maharaja of Darbhanga, in whose household Dr. COATES was physician for some time. Dr. FERNANDEZ deserves credit for his energy in raising this fund to so good a figure. We now appeal to our readers to send in their donations to this fund, big or small, they will be thankfully received and duly acknowledged.

Subscriptions to the COATES MEMORIAL FUND may be forwarded to Dr. LAWRENCE FERNANDEZ, 5 Lloyd Street, Calcutta, or to the EDITOR, *Indian Medical Record*. Mark your postal order "for Coates Memorial Fund." Many military and civil Assistant Surgeons and private practitioners who knew Dr. COATES well, will feel it a privilege to give something towards this FUND, and we invite them to send in their mite without delay. One rupee is not too little, so send it in. The *Record* desires to lead the way in its section of this FUND by a donation of one hundred rupees. Who'll be the next?

HOW DOCTORS ARE HONORED.

THE Journal of the American Medical Association thinks that British journals are the *lowest* croakers on the subject of our profession being hard used and rather set upon

or kept down. It thinks too that British journals croak not only too loudly but without good reason against medical men, without deserving State decorations, or being accorded some social distinction. Going as far back as the time of HARVEY, our contemporary shows how in society the *ecce hominis* has never been denied the doctor, while medical worthies have been the favorites of the rich, much favored by haireesses, the acquaintances and friends of the great men and women of their times; and even the chosen friends and companions of royalty. In all these respects American physicians, too, asserts our contemporary, have not been badly off. The condition of even the rank and file of the profession, we are told, is on an average a condition of comparative prosperity. In short, like other men, says our contemporary, the doctor is what he makes himself socially and otherwise.

THE SUBORDINATE MEDICAL DEPARTMENT.

In order to facilitate movements of troops and do away with the bitter cries of "short-handed" and "overworked" that frequently rise in time of war and other emergencies, the Indian Government has decided that, from 1st October 1895, the Surgeon-General with the Government of India will dispose of all questions concerning recruitment, training, pay, education, promotions, dismissals, resignation, and postings for duty of the Subordinate Medical Departments of the three presidencies: so that, instead of reserving as hitherto, each department for its own presidency, men from the Madras command can be sent to Bombay, Bengal or any place in Indian territories or so forth, but they will continue to be recruited under local examinations and arrangements, as well as educated at the Medical Colleges of Bengal, Bombay and Madras, as at present.

A SUCCESSFUL EURASIAN MEDICAL ADMINISTRATOR.

We quote from the *Anglo-Indian*:—"It must be satisfactory to all large-minded men, as it is peculiarly gratifying to men of his own race, to know that SIR JOHN TYLER, the Eurasian Inspector-General of Jails, in the North-Western Provinces, has made his mark in Jail administration—as most strong Eurasians have done, in almost every branch of the administration in which they have been allowed to find their own level,—and is extorting praise not only from individual officials who affected to sneer at the Knighthood he had won, but in the very organ of petty official humours, whose melodies are usually the echoes of Under-Secretariat twaddle, and even of lower latitudes in the official mould. It is pleasant to see yards of appreciative type bringing up the rear of sneers, which have been snuffed out by strength of character and greatness of purpose.

BILE AND BILIOUSNESS.

SOME interesting experiments have lately been made with regard to bile and biliousness. It has been generally maintained that as bile is poured out a little distance away from the pyloric orifice of the stomach, and as peristaltic action normally is in a direction away from the stomach, bile consequently seldom gets into the stomach. PROFESSOR HERZEN found bile however in 107 out of 142 tests of the gastric juice in a case of gastric fistula. PROFESSOR CONTEJEAN'S experiments on himself confirm the experiments of Professor HERZEN. Thirty to fifty drops of bile in three cubic centimetres of gastric juice will stop gastric digestion. Dr. J. HANDBOURN'S experiments confirm the view that bile retards digestion, but that a little bile is normally present in the stomach and does no harm.

THE FORMATION OF A MEDICAL PROVIDENT FUND.

THE scheme for inaugurating a Mutual Benefit Provident Fund for members of the medical profession in India, has been a long time under discussion, and it has reached the stage wherein formulated rules, bye-laws, &c. have been drawn up. The scheme is now in the hands of a well-known firm of actuaries who are prepared to launch it on behalf of the Indian Medical Association. It provides for all classes, and has assignments for life-pensions, annuities and death payments. It is practically an embodiment of many of the best worked modern schemes. Our readers have long expected the launching of this Provident Fund scheme, and we may now say confidently that it is within easy range of practical politics. Before incurring initial expenses of printing, circulating and the like, it is absolutely necessary that not less than one hundred members of our profession, of no matter what grade or standing, do notify their willingness to join such a fund on approving of its rules, bye-laws &c. We therefore ask our brethren to send us post cards with the following words together with their names and address clearly written on them:—

"I am agreeable to the formation of the Indian Medical Provident Fund and to join the same if I approve of the rules and bye-laws when published."

Make no delay and forward your post card addressed to the Editor, *Indian Medical Record*, Calcutta.

WHAT MAKES A GOOD MEDICAL JOURNAL?

THE question as to what constitutes a good medical journal is discussed by *Gaillard's Medical Journal* much in this way, viz: that a medical journal, like a rational diet must contain a variety of material. The journal that simply strives to be amusing and which treats medicine in a flippant manner is a failure; one that is devoted to scraps and fragments, prescriptions and therapeutic hints betrays a mental dyspepsia rather hard to cure; journals devoted to sectarian and official views cause mental and professional, anaemia; but a good medical journal contains both heavy and light articles—therapeutic hints for every day use and solid articles, describing medical progress. Such a journal must prove both interesting and helpful.

A GOAT-FLESH FAMINE.

A CORRESPONDENT, writing to the *Statesman*, complains that unless the Calcutta Municipality stop the wholesale prosecutions they have lately instituted and alter the elaborate plans laid down for abattoirs or themselves erect slaughter houses sufficient to meet the demand, there is every probability that Hindu butchers will go on strike altogether and necessary goat flesh become an abstract quality, as those persons who have been proceeded against for being owners of unlicensed slaughter houses not only belong to the lower class of Hindus, but are also too poor to command the capital (Rs. 700 to 1,000) necessary for the elaborate improvement that the Municipality wish them to make of their places of business.

AN ANOMALOUS MONOPOLY.

SAYS the *Anglo-Indian*:—"While entirely sympathising with Mr. ERNEST HART, the Editor of the *British Medical Journal*, in his reasonable protest against the assumption, by a mere official service, of the dignity of an independent profession, and the monopoly by this service of appointments, for which in the public interest better provision can be made, it is only fair to admit the existence of valuable local experience in India, of which better use may be made than is shown in the extract in which some sensible realist in the *Indian Medical Service* protests against the overdoing of scientific romance."

ALIVE AT DUTY.

Brigade Surgeon, Lieut.-Col. H. Temple Wright, so well known to our readers, is busy in his retirement. He got the following resolution passed at the recent meeting of the British Medical Association:—"That this meeting desires to submit a respectful suggestion to the General Medical Council that every medical officer whose name appears in the *Navy List*, the *Army List*, and the *Indian Army List* shall be considered to be still alive and at the post opposite his name."

SHORT ITEMS.

Many members of the Indian Medical Association are applying for their certificates of membership, who have not paid in their subscription. This must be remitted before the certificate is sent. The names of "paid up" members are being carefully and neatly engraved by our artist on the certificates. This will involve a little further delay.

'Dodging payment of the doctor' becoming too general a practice at Bagillt, Dr. William Parry brought an action against one J. V. Price for breach of contract, in that having engaged him to confine his wife, he had neglected to send for him when she was brought to bed, and now evaded payment of the contract, though its breach was entirely his own fault. His Honor the Bailie found for the plaintiff.

Never startle your patient by unexpected or abrupt action. Always give him time to prepare for any new treatment or medicine. When the physician makes a change in the drug prescribed or the treatment to be given, always let the patient know something about how the new remedy will taste, and what it is for, or what the new treatment is, and how it is expected to act.—*N. Y. Med. Record*.

Several reputable physicians of Calcutta are having their names inserted into an advertisement which appears in the native papers, as connected with a native pharmacy at 88, Harrison Road. We sincerely trust their names are being published without their sanction, and we now call upon them to prevent their names being so used.

The following students from India have obtained the diplomas of L. R. C. P. and S. Edin. and L. F. P. S. Glas., at the last examinations:—Mervyn Thomas Archiball of Madras; Parimakar Krishnan Chitale of Poona; Goolab Singh of Lahore; Cursetji Pestonji Popat of Bombay; Helen Lauder of Bombay, William Arthur McCutcheon of Lucknow.

The unification of the Indian Medical Services in the three Presidencies will shortly be carried into effect as part and parcel of the Army Reorganisation Scheme, and only awaits the formal sanction of the India Office. The three services will be amalgamated and will be worked as at present through the Surgeon-General with the Government of India.

The Patna Hospital under the able superintendence of Dr. Grace Mackinnon has moved into its new premises. The buildings stand on a high piece of ground, and are distinctly ornamental, besides being well adapted for the purposes they are intended for.

A writer in the *Indian Daily News* remarks that Dr. Ernest Hart's address on Indian sanitation is excluded from the *Transactions of the Indian Medical Congress*, recently published under the authority of its Indian Medical Service editors. This was loyalty to the Service, but not to India.

Telegraphic despatches, dated London, 28th Aug. inform us that the following honors have been awarded for the Wairi Expedition:—To be Companions of the Bath—Surgeon-Col. Spencer. Distinguished Service Order—Brig. Surgeon G. Davis.

Mr. J. Mayho of Jhansi wired the other day to the Editor, *Indian Medical Record*, "Where is the Pasteur Institute started by a private practitioner?" We replied we did not know. Where is it?

Roger G. S. Chew, M.D., C.M., M.A.C., formerly Sanitary and Chemical Analyst to the Municipal Corporation of Calcutta, has been appointed a Sub-Editor of the *Indian Medical Record*.

It is with exceeding regret that we have to announce the death of that well-known and popular dental surgeon, Sir John Tomes, F.R.S., F.R.C.S., who has passed away at the age of 80.

Surgeon-Lieut.-Col. Ranking has been elected Secretary of the Bengal Branch of the Pasteur Institute in India in place of Surgeon-Col. Harvey.

The Stewart prize of £50 has been awarded by the British Medical Association to Brig.-Surgeon. Lieut.-Col. Douglas Cunningham F.R.S. for his work in India.

The Surgeon-General to the Government of India, and the Principal Army Medical Officer, intend visiting Madras and Bombay for the autumn tour.

The Bengal system of selling pice packets of quinine at post offices is being tried experimentally in the district of the Delhi civil divisions.

At the last meeting of the Medical Faculty of the Bombay University, Surgeon. Lieut.-Col. G. Waters was elected Dean of the Faculty of Medicine.

The *Tribune* informs us that the library of the Indian Surgeon General's Office contains 112,000 bound volumes and some 150,000 pamphlets. Can this be so?

The *National Police Gazette* has been mulcted in the sum of \$50,000 as damages for libelling Dr. A. E. Davis and Dr. B. F. Parrish.

The *Indian Planter's Gazette* has warmly espoused the cause of independent physicians, and we are very grateful for such able championship.

Dr. Crombie's eulogistic remarks on Monsieur Haffkine, at a meeting of eight members of the Calcutta Medical Society, are published in all the daily papers of Calcutta.

Members of the Indian Medical Association, who have not paid their subscriptions, will oblige the Treasurer (Surgeon-Major H. C. Hodgkins, S.A.S., Medical College, Calcutta) by sending them in without delay.

Subscribers in arrears with their payments to the "Indian Medical Record" will oblige the Proprietor by remitting their dues as early as possible.

Current Medical Literature.

MEDICINE.

Tobacco Blindness.

During the course of a lecture delivered by him at St. Thomas's Hospital, Mr. J. B. LAWSON, F. R. C. S., said that there was no broad rule of thumb to define the limit of age of the smoker or the quantity of tobacco that could be consumed with impunity as what might be a considerable excess for one person may be a very moderate quantity for another, and smokers may be from any age from 7 years to 65 and upwards; but the majority of cases of tobacco amblyopia occur in persons over middle age, and while the disease is very rarely met with in cigarette smokers, it is occasionally found in cigar smokers, and is most common in those who smoke from 0.5 to 0.75 ounce per diem of "shag" tobacco. Men and women who begin to smoke late in life appear to be rather more prone to tobacco-amblyopia than those who commence the habit at an early age. Concomitant non-ocular symptoms, such as insomnia, dyspepsia, undue nervousness and mental anxiety &c., are generally present in case of tobacco-blindness, whose characteristic symptom is central scotoma, due to either disease or loss of function of the papillo-macular bundle of nerve fibres, which supply the region of the retina in which is situated the yellow spot, whose integrity is essential for distinct central vision. The peripheral vision remains good and the nerve-fibres supplying the other parts of the retina are generally unaffected. As to treatment, he suggests the immediate cessation of the tobacco habit and the improvement of the patient's general condition by a strict regime of diet, change of air and scene, genial companionship, and the careful exhibition of strychnine, iodides, phosphates and bromides, according as symptoms indicate.

Examination of the Chest.

As the result of numerous experiments made on spirometry, pneumatometry and thoracometry, OTIS notes that while in health the lung capacity of males and females between 16 and 40 years of age corresponds to 28 and 16 c.c.m., respectively, for every centimetre in height every one that falls below these figure would either breathe abnormally or have something wrong with his lungs. Any doubts as to lung disease can be settled by auscultation and percussion aided by measurement of the elasticity and capacity of the lungs while in repose and at full inflation. In early phthisis the lung capacity is generally much below the average, as though the expiratory power remains normal, the inspiratory is lessened, and in many instances where the general symptoms were very suggestive of phthisis, the fact of the vital capacity being up to or beyond the normal has given distinct evidence against lung disease and thus warned off errors in diagnosis and treatment. The spirometer shows the cubic containing capacity of the lungs, the pneumatometer their elastic power, and thoracometry consists in the measurement of one measurement made round the chest and back, on a level with the nipples, and a second one, 2 inches below the first. He gives a series of comparison tables obtained from healthy lungs, and declares that treatment and prophylaxis by lung gymnastics is too much neglected.

Cats and Diphtheria.

In a recent contribution to the *British Medical Journal* Dr. W. WILLIAMS, the present Medical Officer of Health to the Glamorgan County Council refers to the Shropshire epidemic of diphtheria (1889) which in all probability originated with three cats kept by Mr. B., a family man.

The symptoms noticed in these cats, all of whom died, were cough, expectoration, wasting, loss of appetite and inability to swallow. For reasons various, a biological investigation was not made of two of the cats; but Dr. WILLIAMS, who examined the body of the third feline, declared it to have died of extensive lung disease. Whether the illness of the children can be positively attributed to the cats would be hard to say; but it is more than probable that it was, as the cats were ill some days before the children and, while ill, were carried about and nursed by them. He states that ever since this occurred he always makes tender inquiries about the cats whenever he is called in to see a patient suffering from sore-throat or diphtheria, as he firmly believes that there is an intimate connection between infectious sore-throat and diphtheria, and cats are not over-particular as to the localities they visit when on the prowl.

Diver's Palsy.

SHARPLES attended on a professional diver, who used to descend to 200 feet when wearing the dress and helmet, but immediately after his last dive he fell unconscious, the moment his head gear was removed. On coming round he complained of shooting pains in his joints, sensory impairment extended through the legs and arms right up to the neck, while motor power was completely abolished, and the bladder and rectum were paralysed. A fortnight after, mucous rales and dulness were noticed in both lungs, and bedsores beginning to form, cystitis and rectal paralysis were present, but there was no knee-jerk on either side. The patient grew worse and worse, and he finally died with a high temperature, the result probably of septic absorption. Necropsy 36 hours after death showed cord, very soft and irregular diffident and other softening and inflammatory changes secondary to hemorrhage at time of onset, but no definite trace of hemorrhage nor anything in the lumbar regions to account for the paralytic symptoms present.

Graves' Disease and the Thyroid Gland.

HECTOR MACKENZIE argued that Graves' disease should be classed among the functional neuroses; for though morbid anatomy gave but meagre information it was apparent that the palpitation, tremor, rapidity of cardiac action, flushings, sweatings, &c., that characterised this affection gave it a place among nervous disorders, especially of sympathetic and ganglia; but GREENFIELD conclusively shows that the neuro-vascular phenomena of Graves' disease are due to the action of excessive or perverted thyroid secretion, consequent on essential degenerative changes in the structure of the gland, even though there may not be any vascular dilatation within the gland itself, and the changes may not lead to any manifest enlargement of the organ as a whole. This subject needs farther threshing out, and if the above theories prove absolutely correct, very different notions, than now obtainable, will be entertained of the treatment of this condition.

Acute Rheumatism.

BOURGET says that though it is quite useless in the gonorrhoeal form and of but little use in some other forms of rheumatism, still salicylic acid is the sheet anchor in acute articular rheumatism; but while the skins of the young have a greater power of absorption than those of elderly persons and of blondes than those of brunettes, a great deal of the absorptive power of the skin depends on the vehicle used to dissolve the salicylic acid. Fat is increasing and vaseline, or glycerine, diminishing or almost extinguishing this power. In the muscular and neuritic forms he has obtained excellent results by giving 0.25 grain of codliver's oil three times a day in combination with 4 grains (each) of phenacetine and salol.

Heat Strokes.

As they did not observe any rigidity of the heart or coagulation of the muscular fibres in several dogs that died after being made to breathe hot air and do work comparable to that of a marching soldier, LAFRAN and BIGNAUD conclude that although severe exercise does not necessarily produce heat-strokes, it strongly favors its occurrence, and that, heat acting directly on the nervous system and not by inducing coagulation of muscular fibre or auto-intoxication death, cannot be due to coagulation of myosin; for, were such the case, cooling the heart would not reinstate the contractions when the temperature was sufficiently high to stop the beating.

Infective Bronchitis.

DUFLOCQ relates some cases of disseminated bronchitis in which pneumococci were abundantly found in the sputum which, though profuse and ill-smelling, did not contain tubercle bacilli but a few colonies of *B. Coli Communis* were present and the prognosis was unfavourable. He urges bacteriological examination of these cases of bronchitis, whose symptoms resemble cholera in many respects, and which always present the same insidious onset, gravity and slowness of convalescence.

Bilateral Brachial Paralysis.

DURING a sixty minutes operation at the Bernhardt Clinic (Berlin) for double salpingo-oophorectomy, the subject's arms were forcibly held up and back. The pressure of the clavicles upon the transverse processes of the sixth and seventh cervical vertebra caused sensory cutaneous disturbances, and a double Erb's paralysis of exactly the same extent on both sides in which there was complete paralysis of the biceps, brachialis, deltoid and both the supinator muscles.

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SURGERY.

Present Treatment of Urethritis in New York.

COMMENTING on the various systems of drugging employed, DR. RAMON GUITERAS concludes:—(1) That, though it is impossible to treat urethritis by any rule of thumb, and a successful method has not been discovered, specialists are better able to treat it than are general practitioners. (2) That the patient should be treated conservatively by diluents and astringents, and the symptoms manifested should control the treatment required. (3) The most successful way of treating a fresh attack is to employ injections, such as bichloride, potassium permanganate, and argentic nitrate, that altogether stop the discharge or reduce it to a 'moisture about the meatus'; but of all these the nitrate of silver is the most reliable. (4) The diluent contains five grains, each, of bicarbonate and citrate of potash and just sufficient citric acid to effervesce, while the astringent injection contains five grains, each, of alum, carbolic acid and sulphate of zinc and one drachm of glycerine to the ounce of distilled water. (5) A stronger injection is sometimes ordered of zinc sulph. grs. x, Lloyd's colorless extract of hydrastis ʒss, ad aqua ʒiv; or a stronger still, of zinc sulph. grs. x, plumbi subacet grs. xv, tinct. catechu ʒi, tinct. opii ʒi, aqua ad ʒiv (6). Regulate the diet carefully, adjust a suspensory bandage and the injections three times daily together with the diluent suffices to cure ordinary anterior urethritis. (7). In posterior urethritis the diluent plus grt. x of tinct. belladonna, to check tenesmus, is kept up and the injection is discontinued; but if the process is very acute the patient is put to bed and given two hot Sitz baths daily and placed on milk and Vichy-water diet, and his bowels kept regular. (8). If these fail, recourse is had to

irrigating the bladder and urethra with a five- to ten-ounce syringe charged with 1:5000 potassium permanganate solution or 1:8000 gradually increased to 1:1000 silver nitrate.

Injection of Olive Oil for removal of impacted Biliary Calculi.

D. E. M. BROCKBANK discusses the above subject with a view to commend the more extensive use of olive oil in the treatment of biliary calculi. The methods in vogue hitherto have been the crushing of the calculus either by padded forceps or a strong needle. The danger of these methods lies in rupturing the duct, with peritonitis supervening. DR. BROCKBANK uses either olive oil or oleic acid, (which is much stronger in action) warmed to G. S. F. and injects it into the gall-bladder by means of a special apparatus consisting of a funnel, 12 inches of drainage tubing, and a No. 10 or 12 Jacques catheter, which fits into the fistulous opening and is further secured there by cotton loosely packed around it. The patient upon whom this treatment was tried benefited very little from it, owing to very serious organic disease of the head of the pancreas, the cancerous mass occluding the entrance of the *ductus communis choledochus* and thus producing jaundice with clay stools, bile-stained urine and colicky pains over the right epigastric region, &c. On inspection a pyriform tumour was visible over the gall-bladder, extending from the 9th costal cartilage down to the umbilicus. Cholecystotomy was performed, after which the pain and jaundice disappeared, and the urine lost its bile pigment, but the stools remained white and clayey. Bile flowed freely from the fistulous opening. This state of things persisted. After 8 weeks olive oil was injected, but of course, for obvious reasons failed to benefit the patient.

A Case of Hepatic Colic cured by the ingestion of Olive Oil.

DR. ALFRED S. GUBB of Paris contributes a case to the *British Medical Journal*, illustrative of the efficacy of olive oil in the treatment of Cholelithiasis. The patient was a man aged 46, who presented the following symptoms:—Sharp pain in the gall bladder region, recurring in paroxysms for a week, confining him to bed. Associated with the pain there was sickness. There was no jaundice, but the stools were very light in color. Morphia injections were the only means of giving the patient relief. A residence of 6 weeks at the Engadine, with plenty of exercise, however, suspended the paroxysms of pain for a period of 8 months, after which the old symptoms returned, associated with intense jaundice. This condition persisted with intervals of 3 weeks for a while and then the intervals became shorter and shorter until he was never free from pain. Regulation of diet, &c. at this period brought about no relief. The gall bladder was greatly distended and tender to the touch, hard bodies could be felt through the walls on palpation. At this stage the ingestion of olive oil was tried as a last resort. The patient commenced with 5 grains of calomel at night, followed by a draught of 8 oz. of fine olive oil in the morning. The oil caused no nausea, and from the very first day the symptoms began to abate, the pain ceased, the motions became darker and the urine clearer. He was cured in a month and a year later there was no return of symptoms. Nothing could be felt in the gall-bladder.

Position in the treatment of Elbow-Joint Fractures.

IN BONNET's paper before the American Surgical Association, statistics of 24 experiments in treating elbow-joint fractures were analysed. Out of 86 surgeons, 73 for the fractures

with the arm flexed at an angle of 90°, while 15 surgeons prefer the extended position. The two chief causes of failure are: (1) Limitation of motion, and (2) reversal of the normal humero-ulnar angle.

Fractures of the Internal Condyle.—In the position of acute flexion with downward and backward pressure in front of the inner condyle with semi-pronation, the parts came into good position. In the extended position it was found very difficult to co-aptate the fragments. In one case, they were widely separated and dangled loosely.

Fracture of External Condyle.—Acute flexion of elbow serves best to replace and retain the fragments. Extension admits of radius moving forward and swinging external condyle with it flexion is therefore impossible.

Transverse and "T" Fractures. The best position was found to be acute flexion with semi-pronation. Extension failed to hold the fragments firmly together.

Fractures of Epicondyle.—Good results obtained with either acute flexion or extension, though the former is preferable to ensure complete fixation. The paper was closed by Dr. H. L. SMITH pointing out some half dozen conclusions deducible from a consideration of the foregoing.

The Danger of Ear-Piercing.

At a coroner's inquest very recently held at Hackney over the body of a child who had died from septic or other allied form of poisoning after having her ears bored for ear-rings the jury severely censured the pawnbroker, from whom the ear-rings had been purchased, for attempting to pierce the child's ears, as they thought that it was not proper for anyone but a medical man to perform this operation. A medical contemporary, while advocating for cleanliness and admitting that a dirty wire in the ear, or an unclean pin or needle breaking the skin surface, might lead to very ugly consequences, contends that that jury had no right to hold medical men are alone capable of this office, which is not a work requiring high professional intelligence or skill, as for generations past ears have been pierced and more serious operations, such as circumcision, have been performed by careful and intelligent laymen, duly skilled in their particular office, with notable success, and an accident such as the above is relatively rare. A wound—cleanliness, being the only safe combination and the only safe rule, there is no need for over-working the medical men with petty jobs or for depriving those who do do them of their right to continue to do them, but local authorities ought to see that the person performing such operation should be careful, capable and scrupulously clean in both hands and implements.

Disease of the Oral Mucous Membrane.

As the mouth serves as a breeding place for the specific germs of many diseases, such as diphtheria, syphilis, tuberculosis, pneumonia, typhus, stomatitis, aphthae, thrush, glossitis, leucoma, leukoplakia, psoriasis, lechthyosis, tylosis, keratosis, plaques, opalines, &c., and there are very many cases on record where syphilitic infection has taken place from the oral cavity whose fluids instead of destroying it act as carriers of the syphilitic (&c.) germ, either by a kiss or a bite or carelessness on the part of the dentist, E. HERBERT ADAMS, Esq. M.D. C.M., D.D.S., complained before the Toronto Dental Society that too little attention was paid in the dental colleges to practical clinical instruction in the diseases of the mouth and the mode for perfect asepsis. He urges dentists to be particularly careful about thorough cleanliness in their instruments, and especially forceps, and in all doubtful cases of oral disease to refuse to perform dental operations until the mucous membrane of the mouth is free from disease, because by neglecting these precautions there is considerable risk to the

life of both the dentist and his patient, as it is quite possible (and has occurred several times) for unclean dental instruments to carry foul and fell diseases to a healthy mouth as also for the dentist to inoculate himself by scratching his fingers or knuckles on a patient's tooth.

A case of Double Penis and Imperforate Anus and Rectum.

Dr. J. J. COLE of Nashville reports that Mrs. T—at her sixth confinement, gave birth to a 10 lb boy with two well-developed male organs situated 6-8 inch apart on either side of the median line. The urethra bifurcating in the perineal region, the boy passes a good stream of urine through each penis, at the same time. Two raphe divide the scrotum into three pockets: the outer ones containing a testicle each and the middle resembling a testicle to the touch. The anus and rectum being absent, an artificial anus was made by Grosse's median incision, which the mother was instructed to keep open by dilating it 2 or 3 times daily with her index finger. The child did nicely, his bowels act as regularly as any child's, and he is in perfect health and developing into a fine little fellow—now over a year old.

Unjustifiable Surgery.

Mathews' Medical Monthly inveighs bitterly against the too hasty use of the knife. He illustrates two cases. One in which a malignant growth too far advanced to justify operative interference was removed by a certain Professor of Surgery, not because the operation would do any good, but simply because it would afford such a splendid clinic for his class. The other in which a lady had her womb, ovaries, tubes and two inches of her rectum excised because she had had a displaced uterus, accompanied by reflexes, which same could have been rectified by means other than extirpation. Declaring that there are fads even in surgery and that these soon die as do the patients, he strongly urges that a surgeon should be a man of firm convictions, but these convictions should be tempered with a feeling of pity for the afflicted.

Syphilis of the Lung.

SCHIBBEN finds that the diagnosis of this condition depends on the history of infection, syphilitic manifestation on other parts of the body, the result of antisyphilitic treatment and the absence of tubercle bacilli, as though it may appear as a phenomenon of secondary syphilis, still syphilis of the lung may exist without any other syphilitic manifestation, and while the physical signs most closely resemble tubercle, the symptoms present nothing pathognomic.

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OBSTETRICS AND GYNECOLOGY.

The Rate of Growth of Ovarian Tumours.

As in the majority of these conditions, it is only by an accident that the patient learns, long (perhaps) after the damage has begun, that there is something radically wrong with her ovaries, Mr. J. BLAND BURTON, F.R.C.S., of the Middlesex and Chelsea Hospitals for women undertook to ascertain an answer to the momentous question—"How long has the tumour been growing?" Though not clearly definite as to the exact length of time, he places the ratio of the rapidity of growth of simple cysts, adenoma and dermoids arising in the oöphoron of the ovary as 1-9: 2-5: 2-25 and gives some interesting cases illustrating his contention that while adenoma and dermoid may arise in the ovary and attain dangerous proportions in an adult woman within the space of 40 and 86 months, respectively, a simple cyst grows with far greater rapidity and may attain as big, or even larger, dimensions within 17 months.

Treatment of Menstrual Dysmenorrhoea.

DISCARDING all other methods for mending the above condition, **ALANSON DICK Esq., F.R.C.S.,** of Cheltenham, *writes out a course of his own*:—Purging the patient *freely* twice a week, and currying the os at intervals of 3 or 4 days between the attacks, *slightly dilates cervix just before the period appears with a curved dilator, of his own pattern, after which he completely cures the uterine cavity and introduces one of his spiral wire stems, which he makes the patient continuously wear during the three or four subsequent periods and directs her to daily—period on or ceased, making no difference—syndring her vagina thoroughly with hot water.* He claims the spiral wire stems being fully open from top to bottom, they not only act as efficient drainage tubes in all manner of uterine affections, but can also be worn with safety and perfect comfort, whether the patient lie up or is up and about, provided she keeps herself clean by regular use of syringe or douche.

Accident caused by Curetting the Uterus.

THOUGH many authorities hold that the very common (and rather frequent) accident of running the curette through the walls of the uterus into the peritoneal cavity is harmless or has very insignificant consequences, **RAFFAY** records a case, recently, where death occurred, and **AUVARD** laying the blame of the accident to the method of dilatation employed, prior to curetting, insists that the curette, instead of doing the damage, merely discovers a perforation that has been already made, while among the ill consequences resulting from curetting **Dr. R. PICHVIN** enumerates:—(1) Abortion by the untimely use of the curette on a pregnant uterus; (2) various forms of septic infiltration and even death from careless antisepsis; (3) rupture of pyosalpinx or other collection of purulent matter necessitating immediate laparotomy or vaginal hysterectomy; (4) uterine atresia but very rarely. Whatever the actual causes, whether to want of skill or care on the part of the operator or whether to sheer accident, the probabilities for perforation are infinitely more when curetting is performed after a confinement at term or after premature delivery than when it is done after an abortion in the earlier months of pregnancy, and more especially when metal dilators with expanding blades are used. Diagnosis of perforation may sometimes be made erroneously owing to a sudden enlargement of the uterine cavity; but a correct opinion may be obtained by measuring the depth of the cavity at two or three different points.

Migrating Ovarian Tumour.

THREE years after the cessation of her catamenia, which had lasted from her 14th to her 48th year, a multipara, *æt* 51, consulted **Dr. HEYWOOD SMITH** for a right (?) ovarian tumour and said that 22 years back she had had ovaritis. Vaginal examination shewing a dextrally retroflected uterus, with a congested cervix and a pin-head polypus at the inner os; operation was resolved on, as she complained that too much walking caused her a great deal of pain in the right ovarian region with heat in the vagina. Abdominal incision shewed that the right ovary, which had atrophied to the size of a bean, lay, with its oviduct, deep down in the right side of the pelvis, from the left side of which the appendages were absent. The retroversion of the womb was caused by the fundus uteri being forced down and fixed by the left oviduct being stretched taut across the pelvis by the left ovary migrating over to the right side, while the fimbriated end of the left tube formed a hydrosalpinx, of the size of an orange, immediately underlying a smaller sized serous tumour (of the left ovary) which, besides being closely adherent to the omentum of the right side and the oviduct, contained cholesterol, hair and some bony plates. The ovaries, tubes

and fimbriae having been removed, the abdominal cavity was closed in three layers by *Swiss* tubes were not used. The uterus was only lightly fixed to the right on the 16th day after the operation; but six days later it resumed its normal position.

Tuberculosis at Delivery: Pueris Infected.

A WOMAN, *æt* 40, who had been *puerperal* for a long time, but in whom there was no clinical evidence of disseminated tubercle, or of meningitis, was delivered at full term by **F. LEHMANN** of a male child. Next day there was paralysis of the sixth nerve with stiffness of the nape of neck, and she died on the third day. The autopsy shewed widespread meningitis, a few tubercles in the omentum, and old tuberculous disease and miliary deposits disseminated over the lung substance; but the uterus and placenta were free from tubercles. The child died in 24 hours. There was serous effusion into its pleura and pericardium and echymosis of the latter, tuberculous deposit on the wall of the left ventricle; and the lungs, left kidney and the bronchial hepatic mediastinal mesenteric and lumbar lymphatic glands were distinctly tuberculous, but the peritoneum, brain, meninges, suprarenal glands and right kidney were normal.

Handy Needs for Post-Partum Hemorrhage.

DR. HIBST says if you fear *post-partum* hemorrhage, have ready:

- Basin of water, 120°.
- Vinegar.
- Broken ice—size of fist.
- Clean handkerchief.
- Hypodermic syringe.
- Ergot.
- Iodoform gauze.

1. If the hemorrhage comes, try, first, external stimulation, then bimanual stimulation.

2. Ice internally and externally. Throw either on abdomen.

3. Handkerchief soaked in vinegar squeezed dry at fundus of uterus.

4. Inject hot water, 120°.

5. Use a battery if you have one at hand.

6. Tampon uterus with gauze.

Having everything ready, you can cover all the remedies in a few moments. It is rare that you will have to go farther than combined internal and external stimulation. The intra-uterine gauze tampon will always stop hemorrhage, but should never be used except as a last resort.—*Medical World*.

Permanent effect of Hydrastinin in Metrorrhagia.

KALLMORGEN remarks that, while no doubt can remain as to the value of hydrastinin in metrorrhagia, reports are hitherto wanting as to the permanency of the results. He kept 86 patients of the Berlin Gynecological Poliklinik under observation during 1½ to 2½ years after treatment with the drug. The best results were obtained in cases of simple menorrhagia and of hemorrhage connected with retro-uterine hematocoele, previous abortion, or disease of the appendages. The success was less marked in chronic endometritis, very doubtful in hemorrhage during pregnancy or due to myoma, and nil in carcinoma.—*B. M. J.*

Birth of Child without rupture of Membranes.

FORBES cites the case of a woman *æt* 22, 7 months pregnant, who during an attack of pleuro-pneumonia gave birth to a child during the act of defecation. There was only a single pain and no hemorrhage. When **FORBES** was called in he found a large cyst occupying the vagina and bulging out between the thighs. He performed a *clitoridectomy* and removed

about a pint of amniotic fluid. The child was a female and weighed 5 lbs 8 oz, being 14 inches in length. The cord was very gelatinous and 16½ inches long, and was pulseless when in the vagina, but after active measures the child breathed well and took the breast. It lived only 16 hours, and the mother had a bad attack of empyema. Judging from the position of the ovum outside the vulva, the breech must have presented, and the placenta attached very low down without being actually *previa*.—B. M. J.

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Gynaecomastia.

H. STIDA maintains that though this name may be applied to the outward appearance of the male mamma in such cases, it does not imply any real histological resemblance to the secreting female breast as depending chiefly on a hyperplasia of the connective tissue, which encroaching on the neighbouring fat implicates both the fatty and the glandular tissues, and short processes or pouches can be made out in the tubular ducts; but the gland does not become acinous as in the secreting female mamma.

The Power of the Jaws.

HAVING ascertained by a spring machine fitted with a registering device that the stress required to crush a beefsteak was from 40 to 50 lbs, while mutton chops needed 35 to 40 lbs, broiled ham and roast beef 40 to 60, pork chops 20 to 5 and tid bits of cold boiled beef tongue 3 to 5 lbs, whereas the tougher parts of beef and mutton required a crushing force of 90 lbs. Dr. G. V. BLACK tried the crushing power of the bites of 150 people and found that in the habitual chewing of food a force was exerted varying from 20 to 30 pounds in excess of what Nature demands. A little girl of 7 years of age turned the index as 30 to 45 lbs, but a physician of thirty-five years of age registered over 270 lbs, at one crunch of his molars.

The Mechanism of Immunity.

MESNIL contributes the results of investigations into the question of immunity with especial relation to the part played by eosinophilic cells in the process. The subjects of the experiments were fishes, esp. *Gobio fluviatilis* and *Perca fluviatilis*. He found that the microbes (anthrax), which were inoculated into the peritoneal cavity, always end by being taken into the interior of leucocytes and there destroyed. According to his experiments the microbes, when in the interior of the cell, are still living and virulent; upon this point he gives details of experiments. In the case of the perch, at no time were eosinophilic cells found either in peritoneal fluid or in the blood, and this both before and after inoculation. It is, according to MESNIL, therefore certain that in this fish destruction of micro-organisms cannot be brought about by bactericidal products secreted by eosinophilic cells. The work is of considerable importance from a scientific point of view, and support the view on immunity already enunciated by METCHNIKOFF.

Pathology of Infantile Paralysis.

While describing a case of acute anterior poliomyelitis occurring in a child of five months of age, but previously healthy Dr. E. REEDLICH noted that instead of being confined to the ganglion cells (the popular view) the inflammatory process had chiefly affected the anterior horns of the spinal cord, whose entire length, however, had the appearance of the presence in the blood of some toxic element that materially affected the vessels and secondarily the structures of the spinal cord and also involved the remainder of the grey matter, while small foci of inflammation were found in the tracts of the white matter,

in the medulla oblongata and in the basal structures; but not in the cortex cerebri. The changes in the anterior horns were most intense in the lumbar, less so in the cervical and least in the dorsal region; but in the posterior horns, the central substantia gelatinosa, Clarke's columns, and in the anterior and lateral tracts of the white matter were found small 'areas of inflammation,' only one of which was discovered in the posterior column. The vessels outside the cord and especially the artery of the anterior fissure were affected with acute inflammation. The peripheral (especially the phrenic and inferior laryngeal) nerves showed very severe degeneration of the muscles. The inflamed areas in the white substance depended upon acutely inflamed vessels which, though in their vicinity did not appear to be connected with the anterior horns. The case terminated fatally on the tenth day after the onset of the illness, during the continuance of which there was loss of voice and knee-jerks, slight sensory impairment, feverishness, weakness of all the limbs and difficulty in swallowing and breathing.

Microbic Association in Tuberculosis.

MARAGLIANO would explain the varying course of phthisis in different subjects by the absence or presence of micro-organisms other than the tubercle bacillus. For him the tubercle bacillus is responsible for the tubercle nodule solely, and for a certain diminished resistance of the tissues created by its proteins or its toxins, and so rendering them more susceptible to the attacks of other micro-organisms. It is to these latter that we owe the pneumonic and caseous foci so frequently found in the course of phthisis. Unless other micro-organisms come, it may be that the tubercle bacillus may give rise to no symptoms during life, and occasionally one finds *post-mortem* tubercle nodules where there has been no suspicion of phthisis during life. Most of the secondary symptoms of phthisis—for example, fever, wasting, bronchopneumonia—are, according to the author, due to the superposition of micro-organisms other than the tubercle bacillus; and it is just because the air of mountains and of the sea is so free from these organisms that it is so negatively beneficial to the phthisical. This conception of mixed infection in phthisis was broached by the author in 1891, and seems to throw light on the clinical course of pulmonary phthisis.

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Criminal Anthropology.

In a recent essay on this subject Professor LOMBROSO, of Turin, describes what he terms the "criminal type." The features characteristic of this type are found in the faces of most regicides and assassins of presidents, notable Fieschi, GUITEAU, and NOBILING. To this type belong also the promoters and leaders of reign of terrors, such as CARRIER, JOURDON and MARAT. Among noted anarchists he describes the bomb thrower, BAVACHOL. LOMBROSO says: "What first forcibly impresses the beholder of BAVACHOL's face is its bestiality. Its asymmetry is strongly marked; the nose deviates greatly to the right, the ears are implanted on the head at different heights, and the lower jaw is heavy, square and prognathic. In speaking of BAVACHOL's history, he says: "The pupil of a primary school until the age of fifteen, BAVACHOL left it almost absolutely illiterate. Designed by his parents for a simple mechanical trade, he abandoned his apprenticeship, because unable or unwilling to acquire even its rudiments. He became a hopeless idler,

diamond shafts and circled counterfeit money. He murdered a corpse and robbed it of its jewels. He murdered an old hermit of eighty-four years, in order to steal his money. At about the same time, he attempted to kill his mother for a fancied offense. It was established during BAYACON's trial that his grandfather, KOENIGSTEIN, and his great-grandfather both perished on the scaffold convicted of murder and arson.—*Alienist and Neurologist*.

Legal Penalties for Medical Negligence.

THE VIENNA Medical Chamber at the present moment has the following question under its consideration. A poor law medical officer having been called to see a man who had fallen ill with gastric symptoms, he diagnosed acute alcoholism without making any examination, and prescribed soda-water with cold cataplasms. The condition of the patient became worse, and another practitioner, who was sent for, found him unconscious and apparently in a fit of apoplexy. The patient died, and a charge of causing bodily harm was brought against the original medical attendant, in accordance with paragraph 481 of the Penal Law. The expert who gave evidence explained that although a careful examination might not have led to a different diagnosis, there was, in his opinion, a neglect of duty, for the poor law medical officer had not fulfilled his obligation of trying to find out the cause of the illness. The accused was fined 25 with twenty hours' imprisonment, a sentence which was confirmed by the Court of Appeal. By this decision the court declared that the neglect of examination had caused no injury to the patient, but that the medical officer ought to have known that his conduct might endanger life. This result has caused a great sensation throughout the profession of medicine, for it throws serious obstacles in the way of medical treatment. Who would perform a surgical operation if the above-quoted paragraph be interpreted in this manner? Every operative procedure exposes the patient to danger, and the surgeon will have to justify himself even in the cases where operations are successful. The law punishes the infliction of bodily injury by a medical man's ignorance or negligence, but does not punish the endangering of the patient's life or health when caused either by medical treatment or by neglect. The Medical Chamber has taken up this question, and at the last meeting a member brought in a motion referring to the provisions of the law as regards offences committed by medical men. Paragraph 481 is inapplicable hereto, for it imposes penalties amounting to £40 fine or three months' imprisonment, whereas paragraph 488 imposes only a fine of £40 in the case of actual injury or death due to neglect. The Chamber adopted this motion, and will take steps to defend the profession against decisions which are not in conformity with the spirit of the law.—*Lancet*

Disinfection of Rooms.

CONSIDERING the important part played by disinfection in tuberculosis and the cumbersome modes hitherto employed for its effect, DR. SHERIDAN DELÉPINE, discarding other media, argues strongly in favor of bleaching powder, in solution, as being the cheapest and yet the most efficient disinfectant known, as beyond its well-known bleaching action on all organic odors and neutralisation of mineral pigments, chlorinated lime does not spoil things as much as one would expect, and can be used without any fear of damage in rooms from which all hangings and carpets have been removed. He advises (1) whitewashing the walls, ceiling and floor with three or four coats of a ten-per-cent aqueous solution of bleaching powder. (2) A large tin basin filled with water or chlorinated lime solution and carrying water-bath fashion

(either floating in it or almost closing the mouth of a glass vessel containing acetic acid or mercuric acid, the basin being placed on a small earthenware stove in the middle of the room to prevent draughts from being lighted and the doors and windows closed as well as possible. The steam, as it rises, supplies the necessary moisture, while the acid vapor secures the acidity of the air required to cause a more rapid and continuous setting free of chlorine, which thoroughly effects the work of disinfection at a very low cost.

The Dietary of European Peasants.

DR. A. THUBMAN, in the *Anthropological Review*, published at Milan, gives an interesting summary of the dietetic habits of the rural population of several European countries as follows:—

Belgium.—Coffee, black bread, potatoes, vegetables, chicory and sometimes *salsimens*.

Holland.—Black bread, vegetables, fish, coffee.

England.—Beef, pork, potatoes, vegetables, tea, cheese, beer, cider.

Ireland.—Oatmeal bread, potatoes, milk, a little lard.

Scotland.—Oatmeal bread, potatoes, milk, butter, coffee, tea, very rarely flesh.

Pomerania.—Potatoes, milk, green vegetables, lard, flesh three times a week.

Rhenish Prussia.—Milk, soup, dried fish, potatoes, flesh for the feast days.

Saxony.—Bread, butter, cheese, soup, vegetables, coffee, flesh on feast days.

Bavaria.—Porridge, butter, milk, cabbage, potatoes.

Italy.—Macaroni, bread, fruits, beans, peas, and lentils, wheat, rice, wine, a little flesh on feast days, but only in certain regions.

Spain.—Bread, vegetables, fish, fruits, flesh as a luxury.

Russia.—Rye bread, cabbage, mushroom soup, wheat cooked with milk and oil.

Sweden.—Potatoes, rye, oatmeal, barley, milk, salt herring, beer, no flesh food.

Switzerland.—Cheese, milk, coffee, vegetables, soup, wine, rarely flesh.

Turkey.—Black bread, onions, *poivreux*.

France.—In the neighbourhood of Bourgogne meat is eaten but once a year. The peasants of Morvan eat meat twice a year. The peasants of Sarthe once a year; the peasants of Auvergne five or six times a year; the Bretons never, except rich farmers, who eat flesh on feast days.

We see from this table that European peasants subsist almost wholly upon vegetable food, a regimen which is highly economical, and by which they are sustained in good health.—*Good Health*.

A Good Health Prescription.

My palld friend, is your pulse beating low?
Does the red wine of life too sluggishly flow?
Set it spinning through every tingling vein,
By outdoor work, till you feel once again
Like giving a cheery school-boy shout;
Get out!

Are you morbid, and, like the owl in the tree,
Do you gloomily hoot at what you can't see?
Perhaps, now, instead of being so wise,
You are only looking through jaundiced eyes;
Perhaps you are bilious, or getting too stout;
Get out!

Out in the air, where fresh breezes blow
Away all the cobwebs that sometimes grow
In the brains of those who turn from the light
To all gloomy thoughts instead of the bright
Content with such foes and yet them to trust
Get out!

—*W. A. R. R.*

TERAPEUTICS AND PHARMACOLOGY.

Methylene Blue in the treatment of Filaria sanguinis Fovinis and other Affections.

A. In a recent meeting of the Fifth District Medical Association, President **AUSTIN FLINT**, M.D., LL.D., explained that a leak having in some peculiar manner sprung from the lymphatic into the urinary tract, the *Filaria* passed from its familiar haunts in the lymphatics of the scrotum and nether extremities into the rest of the lymphatic system where, growing into 0.84 millimetre long, and 0.0075mm broad with a pointed tail and a rounded-off head carrying a tongue-like process, it carefully hid itself till its victim sought his couch for sleep when it sneaked into his blood and gave rise to chyluria, hæmaturia and chylous diarrhoea. In *plasmodium malaria* methylene blue acts almost like a charm, while 2 grains given every 4 hours for less than a fortnight totally cured a case where besides numerous *filaria* being found in his blood, the patient's urine (sp. grav. 1021.5) was devoid of urinous odor, presented a white opaque color (like milk) with a very slight reddish-yellow tinge and acid reaction. It contained 1.51 per cent of urea, 39 per cent. of albumen and a whitish sediment mixed up with fatty granules, red blood-corpuscles, oil globules, leucocytes and bacteria; but not so much as a trace of sugar. Equally satisfactory results were obtained in malarial splenitis and chronic cystitis with this drug; but, it was in gonorrhoea that it seemed to exert such a specific action (even though it colored the urine and faeces a greenish-blue for a few days) by immediately attacking and destroying the gonococcus, that Dr. FLINT declares, immoral though his suggestion may at first sight appear, and improper it is nevertheless a scientific proposition that methylene blue would probably act as a prophylactic against gonorrhoeal infection in impure intercourse.

Calcium Chloride in Snake-bite.

CALMETTE'S contention that the therapeutic action of calcium chloride lay in its forming some substance which entering the circulation either neutralised or destroyed the snake poison, is rejected by PHISALIX and BERTRAND who claim that if this salt is to be used it must be injected deeply at the exact spot where the fangs enter; as its action is purely local and it destroys the poison, locally by causing the tissues to slough and thus preventing absorption of the toxic material.

Opiate Grass.

In certain parts of New Mexico small patches are found of a grass which produces a deep sleep on any animal grazing on it, and travellers have often been seriously inconvenienced, when they have accidentally halted near a place, where this grass grows pretty thickly, as their horses after grazing on it have fallen fast asleep and they were unable to continue their journey. A question has arisen as to whether this grass contains opium or whether its narcotic power is due to some other substance.

Cough of Phthisis.

| | | | |
|------------------|-----|-----|------------------|
| R. Glycyrrhiz | ... | ... | f 3ij. |
| Tr. ferri chlor. | ... | ... | f 3iij. |
| Crescent | ... | ... | gtt. xxx. |
| Alcohol | ... | ... | f 3j. |
| Tr. guaiac. co. | ... | ... | q. s. ad. f 3ij. |
| Vin. malag. | ... | ... | f 3viij. |

M. Sig. : Tablespoonful in sweetened water before meals.—*La Clinique.*

Gall-Stones treated with large doses of Olive Oil.

A WOMAN, at 46, complaining of biliary colic with severe vomiting, vomiting, collapse and acute pain extending from

liver to right shoulder-blade hypodermic morphine was resorted to ease the pain, but well-marked jaundice followed and passed off in a few days' time. Two months later she had another severe attack of colic, which re-appeared as intervals of 21 to 44 days for nearly 3 months. As gall-stones were not found in the stools and the usual remedies proved useless, cholecystotomy was advised by Dr. STEPHENSON, and the woman given 8 grains of bile pills, overnight, and next morning 3ij of olive oil. She passed 6 large gall-stones, two of which were faceted and measured nearly 0.5 inch. There was little, if any, nausea and no pain, and, the jaundice passing off in a few days, the patient made a complete recovery, and for the past year has been free from colic.

Sure cure for rheumatism.

appears to be of the nature of 'Chelonea penicillata' without the excipient.—

| | | | |
|-----------------|-----|-----|------|
| Pulv. rhei | ... | ... | 3ij. |
| " guaiaci | ... | ... | 3ij. |
| Potass. bitart. | ... | ... | 3ij. |
| Sulphur. | ... | ... | 3ij. |

M. Chemist & Druggist.

Neurasthenic Debility.

| | | | |
|---------------------|-----|-----|---------|
| R. Acid phosphate | ... | ... | 3ij. |
| Ext. cocoe liquid | ... | ... | 3ij. |
| Ext. damian. liquid | ... | ... | 3ij. |
| Tr. nucis vomic | ... | ... | mx. |
| Syrup zingib | ... | ... | 3ij. |
| Aq. | ... | ... | ad 3ij. |

Ft. doct. S.—To be taken in water at 11 A.M. and 6 P.M.—SIR ANDREW CLARK.

Morphinomania cured by Phosphate of Soda.

MANY, but most of them futile, methods have been tried for the removal of the above condition from the unfortunate slaves to the awful habit. A certain medical man used to use seven grains of morphia daily, so M. J. LEYS gave him sodium phosphate, subcutaneously, gradually increased in posology. As the phosphate was increased, the morphia was progressively diminished for two months, when it (the morphia) was discontinued entirely and the quantity of the sodium phosphate was daily decreased and finally stopped, in two weeks more. The desire for morphia has altogether vanished.

Value of Iron Preparations.

THE experiments of MARFON and HAMBURGER prove beyond doubt that iron, medicinally applied, is not at all absorbed by the human body, nor does it build up the blood hæmoglobin, which chiefly contains the iron (from 30 to 40 grains) found in the body. The only ways that iron can be excreted from the animal economy is per faeces or urine, but BRUNER, SCHMIDT and VOIT have established that while the body-iron is lost per the urine, the medicinally added iron, eliminated by this fluid, is inappreciable and as at the very least 99 per cent. of the ferruginous salt taken per *ore* comes away with the faeces, without being influenced by the stomach or the liver, the alimentary tract plays little or no actual part in their absorption. Therefore, argues Professor HUGER, the utility of iron in therapeutics is very largely a matter of suggestion; as, if this metal or any of its preparations be absorbed by the body, the quantity absorbed is scanty indeed and not necessarily assimilated; while on the other hand, in about ten days, the ordinary food will convey to the organism iron equal to one-third of that in the blood, as, by a peculiar ordinance of Nature, food always contains enough iron to supply the need even of the very anæmic.

Serum Treatment of Malignant Growths.

TOXITERAPY has of late taken some giant strides in various directions with varying success as to results, and now RAPIN claims that if pursued with energy and perseverance in most forms of malignant tumours, not readily amenable to

operation, repeated subcutaneous injections of streptococcal toxin, will produce temporary (if not permanent) amelioration and retard further growth by exciting in it a rapid degeneration which may extend even to necrosis of the growth and ultimately lead, in the most favorable cases, to a radical cure.

Tooth-Wash.

(1)

| | | | |
|--------------------------|-----|-----|---------------|
| Castile soap | ... | ... | 1½ oz. |
| Water | ... | ... | 8 lbs. 6 oz. |
| Disinfects by heat, add— | | | |
| Glycerine | ... | ... | 36 oz. |
| Alcohol | ... | ... | 8 lbs. 6 oz. |
| Oil of peppermint | ... | ... | 1 oz. 5¼ dra. |
| " wintergreen | ... | ... | 1 " 5¼ oz. |
| Syrup | ... | ... | 4½ lbs. |
| Tincture of cudbear | ... | ... | 9 a. |
| Filter. | | | |

Label.

Fragrant tooth-wash, for cleaning and preserving the teeth and gums, imparting a refreshing taste and feeling to the mouth. Directions for use: Dip the brush in water (soft or rain-water the best), then pour a small quantity of the wash on it, and rub it on the teeth; it forms a froth (on the mouth,) which should be allowed to penetrate every crevice.

—Chemist and Druggist.

Treatment of Uræmia.

As the blood serum of healthy human beings and of those suffering from non-uræmic Bright's disease produced nephritis or glomerular nephritis when injected into dogs, while similar treatment with the blood serum, or the dropsical effusions, of persons afflicted with uræmia, developed artificial uræmia in dogs. HUGHES and CARTER made several experiments with human, dog and horse serum on rabbits, which not only shewed that the digestive tract was the seat of origin of the poisonous substance, whose formation might be prevented by a vegetable diet, but also led to the conclusion that while the nephritis-producing substance was constantly present in the serum of carnivora such as the human being and the dog, it was entirely absent from the serum of herbivora and graminivora, such as the horse. What the actual nature of this poisonous substance may be is still a matter of doubt; but its power can be considerably lessened and even destroyed by moderate heat. Vegetable purges and diaphoretic, blood-letting and hot-pack are suggested by Drs. CARTER and HUGHES as being the wisest course of curative treatment; but they argue most strongly in favor of venesection, which they say "cannot be too highly recommended," as its good effects are best seen in grave cases, such as marked dyspnoea, hyperpyrexia, cerebral symptoms, &c.; but the quantity, to be withdrawn, ranges from 20 to 40 ounces, and depends very greatly on the special character of the case.

Correspondence.

INSANITARY CALCUTTA.

From S. M. J. CLARKE, Esq.,

Secretary, Bengal Chamber of Commerce.

To THE SECRETARY,

Govt. of Bengal, Financial Dept.

SIR,—The attention of the Committee of the Chamber of Commerce has been directed, by representation from some of its members, to the highly insanitary condition of the Town of Calcutta. Vital statistics prove that the residents are not only liable to the endemic ailments of the East, but that those waves of disease, which modern science in many other places has worked so successfully to

stamp out, are recurring in Calcutta with greater frequency and increasing severity. After emerging from an alarming outbreak of small-pox, and from a period of anxiety from cholera, it is startling to learn that the residents have now to face another epidemic.

The community has learned from the remarks published by the Health Officer to the Municipality, that fevers of a typhoidal character are greatly on the increase throughout the city, and while it is satisfactory to know that the poorer classes of natives are not as yet subject to this form of malady, it is a matter of serious concern to be made aware that fevers of this type are increasingly prevalent amongst Europeans who inhabit the mercantile quarter. The insanitary construction of the city was demonstrated by MR. BALDWIN LATHAM a few years ago. The epidemics that have of late raged with so much deplorable virulence among all classes seem to declare the consequences of this position, the only inference to be drawn is that the inhabitants must be rendered liable to epidemic outbreaks so long as the causes of disease are permitted to exist, and, by their continued existence, to increase the danger.

I am here to point out that the Committee view with the very gravest apprehension the very serious consequences which would follow to this city were the plague to reach it from China. The scourge appeared not long ago so near as Singapore. There is reason to believe that if it once entered Calcutta the insanitary condition of the town is likely to give it a firm hold. The Committee consider that the probability of such an epidemic cannot be ignored. They would urge that precautions, other than those associated with pratique, should be taken to guard the metropolis against such a contingency as they have indicated. Were the plague to reach Calcutta, the immediate result would be the establishment against the fort of quarantine on a scale which would dislocate, and even suspend trade, and lead, not improbably, to financial disaster. Locally, the effect on labor would be fatal. There would be a general flight from the stricken city—a flight in itself likely to make the mischief infinitely terrible. With the possibility of such a misfortune, added to the increasing dangers of local insanitation the Committee, representing the mercantile community, feel they cannot keep silent.

The Committee have reason to believe there is a very strong feeling on the part of all sections of the community that efforts should be put forth by those responsible for the health of the city to grapple with its insanitary evil, and I am to say that as the Municipal Commissioners have failed to do so, the Committee consider the time has arrived when the Government of Bengal should lend its influence and help to rectify the state of affairs I have alluded to.

The Committee recognise and frankly admit the physical difficulties that beset the whole question, and acknowledge that the Municipal Commissioners are in no way responsible for inefficient works to which they may have become heir. For such they must be exonerated.

There can be no excuse, however, for the perpetuation of any dangerous nuisance that can be removed, nor can it be for a moment admitted that the Municipality have any

right to serve the public interests at their own discretion and without reference to hygienic necessities.

In this connection I am to direct attention to the trenching of night soil to the south of the city at Gergatsha in the midst of the populous suburb of Alipore. This has come to be an offence to the general community. It is known that trenching has been carried on there for many years, but of late it has out-grown in its proportions all ideas of decency. It has become so injurious that the Committee need not go into the character of the nuisance. That has been admitted by the decision of the Alipore Court and by His Honor the Lieutenant Governor in his recent minute on the subject. They confine themselves to condemning the extreme thoughtlessness and want of appreciation of consequences involved in locating what, under any circumstances, must inevitably be a nuisance at a point where it must be most intensely felt. They protest against continuing this trenching ground, and especially against the opening of a new ground on the windward side of the city, and, as the Municipality appear unable to appreciate the danger of locating a trenching ground in such a relative position to the city, the Committee would appeal to Government to take action under the controlling sections of Act II. of 1888 (B.C.) and to cause the Municipality to remove trenching grounds entirely from the windward side of the city, and to place them in a locality where their ill effects shall either produce no harm or produce the minimum of harm. Unless this is done, the opening of a new trenching ground will create a permanent danger to the health of the city, and especially to that of the southern suburbs.

The Committee would very earnestly solicit the favor of His Honor the Lieutenant-Governor taking this matter into early consideration and passing such orders as may be necessary. In the meantime, they would solicit from Government the favor of Government prohibiting the Municipality from opening any new trenching ground on the south or south-west of the city and the southern suburbs, and generally they would submit that a careful investigation should be made into the reported increase of fevers of a typhoidal character, and into the causes of such increase.

CALCUTTA, }
10th July 1895. }
I have the honor to be
Sir,
Your most obedient Servant,
(Sd.) S. E. J. CLARKE,
Secretary.

II.

From H. H. RISLEY, Esq.,

Secretary to the Government of Bengal.

To THE SECRETARY,

Bengal Chamber of Commerce.

SIR,—I am directed to acknowledge the receipt of your letter No. 851—'95, dated the 10th July 1895, in which the attention of Government is drawn by the Chamber of Commerce to the insanitary condition of the town of Calcutta, and to the facilities which are afforded by it to the introduction and spread of epidemic diseases. The trenching of night soil to the south of the city at Gergatsha is referred to as highly offensive, and as a standing menace to the health of the town; and the Chamber,

while urging that steps may be taken to discontinue the use of this trenching ground, request that the Corporation of Calcutta may be called upon to remove trenching grounds entirely from the windward side of the city, and to place them in a locality where their ill-effects will not be felt. It is also desired that a careful investigation may be made into the reported increase of fevers of a typhoidal character in the town, and into the causes of such increase.

2. In reply, I am directed to say that the Lieutenant-Governor welcomes the Chamber's representation as lending support to the action of Government in endeavouring to arouse the Corporation of Calcutta to a sense of their duties and responsibilities as guardians of the public health. His Honor fully agrees in the importance, on commercial as well as on other grounds, of improving the health of Calcutta, and keeping it free from epidemic. He has constantly dwelt on this, and impressed it on the Corporation; and the weight of the Chamber's influence will be of material help in bringing about the desired result.

3. As regards the disposal of sewage in the area, as yet unprovided with regular sewers, I am to say that the Lieutenant-Governor is unable to go with the Chamber in their general condemnation of the system of trenching sewage as such, nor can he admit the necessity of prohibiting the location of trenching grounds to the south or south-west of Calcutta. The practice of rendering sewage innocuous by mixing it with dry earth was hailed not very long ago as a great sanitary discovery, and it has been largely adopted in Europe. The Lieutenant-Governor is informed that the system is successfully followed in several towns in India, and it is the universal practice of Bengal jails to dispose of faecal matter in this way, and no unpleasant results have ensued. It is the misuse and not the use of the trenching system which should be objected to. It depends for its success on the oxidizing effect that a porous substance, such as dry earth, exerts by bringing any sewage with which it is mixed into intimate contact with the air contained in its pores. If crops are afterwards grown upon the land thus treated, the process of purification goes on more rapidly and certainly. It follows from this principle that sewage trenches must be shallow, and that the quantity of loose earth filled into them must be substantially in excess of the quantity of sewage to be covered. In the neighbourhood of Calcutta, where the rainfall is heavy and the subsoil water stands at a high level during several months of the year, special care is required in the management of a trenching ground. If the sewage is deposited too deep and thus removed from the influence of the air, it retains its offensive character for an indefinite time, and undergoes a process of fermentation which generates foul gases very dangerous to health. At the same time it is liable to be affected by the movement of the sub-soil water, and to pass by percolation into tanks and wells in the neighbourhood of the trenching ground.

4. Another essential part of the system is that a definite ratio should be established between the population to be served and the area to be reserved for trenching. It was the duty of the Health Officer of Calcutta to have calculated these figures, and to have shown that, given a

population of so many thousand persons, so many tons of fecal matter have to be disposed of daily. So many square yards of surface are required for this purpose, and therefore so many acres should be taken to ensure provision for the requirements of a year, after which it is assumed that if the soil has done its duty, the same area can safely be trenched over again.

5. The Lieutenant-Governor is satisfied that these necessary precautions were neglected at Goragacha in the old ground, and he is informed that they are being neglected in the new ground which adjoins it. Trenches have been dug six feet deep, and too much sewage has been deposited in them; some have been dug in low-lying ground where water will stand after rain has fallen; others have been dug in loose and freshly laid earth, which heavy rain will saturate and convert into a swamp. There has been no attempt to arrange the trenches symmetrically, so that different parts of the ground should come into use in regular rotation; nor have any crops been grown. No calculation appears to have been made of the amount of fecal matter to be disposed of or the area required for the purpose, and no attempt has been made to establish a proper relation between the population to be served and the area of the trenching-ground. The result of this neglect of the elementary conditions of sanitary trenching has been to convert the old Goragacha ground into an extended cesspool of the most offensive character, while the new ground will soon be reduced to the same condition, unless special precautions are taken.

6. Instructions will now be issued to the Chairman of the Corporation to the following effect:—

(1) In no trenching ground should the depth of the trenches exceed three feet, nor should the bulk of sewage deposited exceed one-half of the amount of earth filled in.

(2) Immediate effect should be given to this rule in dealing with the new Goragacha ground, and as soon as that ground has been used up, it should be closed, and the sewage of the wards concerned deposited in the new ground at Gopalpur.

(3) This ground, and any new ground that may hereafter be opened, should be trenched symmetrically and on a regular system, so that each part of it shall be used in rotation, and crops grown on the portions used as soon as this can be done.

(4) Trenching on low land should be avoided as far as possible: if only low ground can be obtained, it must be artificially raised.

(5) Steps should at once be taken for acquiring the necessary area of trenching ground, and a regular scheme should be drawn up for its working; the amount of sewage to be disposed of should be estimated with reference to the population concerned; and the area necessary to deal with it on the conditions laid down above should be accurately determined.

(6) The old Goragacha ground has been brought into such a foul condition that in all probability crops will not grow on it. If this is the case, it should be turfed over at once, and the new Goragacha ground should be either turfed or cultivated as may be found practicable.

7. In order to secure that these orders shall be effectually carried out, the Sanitary Commissioner will be request-

ed to cause all the trenching grounds near Calcutta to be regularly inspected by the Deputy Sanitary Commissioner of the Metropolitan Circle, and the result of his observations reported to Government.

8. The Chairman of the Corporation will be asked to report on the statement referred to in paragraph 2 of your letter, that fevers of a typhoidal character are greatly on the increase throughout Calcutta.

Yours, &c. H. H. RISLEY,
Secretary to the Government of Bengal.

CALCUTTA, 25th July 1895.

LEPROSY IN ITS PATHOLOGICAL AND CLINICAL ASPECTS.*

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Though elegantly got up and beautifully illustrated the above work unfortunately contains a number of errors, illogical deductions and deliberate perversion, or crowding out, of important public tests and solemn facts, for which peccadilloes it would be hard to fix the actual culprit as the author's views and the translator's ideas are inseparably jumbled up together.

I will not impinge on your time and space by critically treating each one of the many inaccuracies, but shall merely confine myself to some of the most glaring and unpardonable blunders:—(a) page 1. "Leprosy is a chronic disease caused by the lepra bacillus," because the microbe is only found in the latter stages of nodular leprosy and is utterly absent in the early and middle stages, and in the anæsthetic forms of the disease. (b) page 25. "Tuberculosis and leprosy are not allied diseases," because no leper ever died from leprosy, and unless he were carried off by febrile exhaustion, dysentery or some other concomitant affection, *tuberculosis* INvariably terminates the leper's suffering and lease of life; while it was in the viscera and tissues of *lepers, dead of tuberculosis* that LOOFT, ARNING, SIMPSON and others claim to have found a bacillus, which they called the specific microbe of lepra, but which it is more rational to conclude was a modified form of *B. tuberculosis*, which made up in number and sluggishness what it lost in size and activity from faulty nutrition, and the vital resistance of the body it inhabited. (c) page 96. "Because the *B. lepra* cannot be cultivated in bouillon or nutrient media outside the living body; it cannot be directly transferred from one animal to another by inoculation." Against this we have the Government inoculation of the convict KEANU; the excellent work done by ARNING, NEILSON, and DANIELSEN; the inoculation of that dearly good but unfortunate man Rev. Fr. DAMIEN; the indisputable results published by many other experimenters, myself among the number, and the confession at the late Buda-Pest Congress of Hygiene that bacilli belonging to one and the same family may and do assume a large variety of size, habits, virulence and activity in accordance to the nutriment they receive and the resistance of the blood of the animal they inhabit, without however losing their generic shape or form—except in size, habits, and number there is no difference in the *B. tuberculosis* and

* By Dr. G. A. Hansen and Dr. Carl Looff. Translated by Dr. Norman Walker.

the alleged B. lepra. (d) page 103 "In his Reconsideration of Leprosy Mr. W. Tebb utterly fails to produce conclusive evidence of the direct connection of leprosy with vaccination." Let Dr. WALKER carefully read—the cases published by Dr. GAIRDNER in the *British Medical Journal* (11-6-87); the evidence of mighty men such as MOURITZ, EMERSON, LUTZ, BAKWELL, FREELAND, SIR JONATHAN HUTCHINSON, SIR WILLIAM MOORE, TROUSSEAU and numberless others; Dr. M. D. MAKUNA's Medical Vaccination Census, and the evidence published by Mr. Tebb on pages 190, 191 to 196, 201, 103, 209, and 288 of authentic and convincing cases reported by Drs. CHUNDER GHOSE, R. S. CHEW, G. HOGGAN, G. THIN, DAUBLER, P. T. STUBBS, S. P. IMPRY and Bai Bahadur A. MITRA, Chief Medical Officer of Cashmir—every one of whom has had a large and varied experience of many years in leprosy, and whose experience is not confined to one solitary nation or district, as was that of the authors of the above work—and then ask Dr. WALKER if he will still persist in his contention that leprosy cannot be invaccinated or that he has the right to deliberately ignore the good results obtained in India.

Yours, &c., ROGER G. S. CHEW M. D. &c.,
Late Analyst to the Corporation of Calcutta.

CALCUTTA, 10th August 1895.

QUININE IN CHOLERA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—DR. HEHIR falls into some unconscious injustice in saying in your paper of the 16th August that he believes he was the first to shew that the use of quinine in cholera was a perfectly rational line of treatment. In his work on "Fever and Cholera," published in 1873, Dr. ALEX. SMITH has pages on the use of quinine in both cholera and sunstroke, and original suggestions on its prophylactic use in fever which bear on its use in the reactionary fever of cholera. The book was printed only for private circulation—and indeed I owe my own possession of a copy to Dr. SMITH's accidental identification of myself with the authorship of some article in a lay journal on the etiology of cholera, from which he had made quotations in his work—but on my shewing the book and Dr. SMITH's kindly letter which accompanied it to Dr. WALLER then a well-known independent practitioner in Calcutta he at once claimed the discovery for himself and told me he had published it in some periodical whose name I have forgotten.

Yours, &c., W. C. MADGE,

(As we understand it, Dr. Hehir claims not to have been the discoverer, of the use of quinine in cholera, but to have been the first to bring it into general use, as a routine course of treatment. The first time that this cinchona alkaloid was used in cholera was on the Indian Pilot Brig as far back as 1790, when the crude sulphate was first introduced.—E. J. M. R.)

THE MILK SUPPLY OF BRITISH TROOPS IN INDIA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Now that there are a good number of cases of enteric fever and fatalities among officers too, it will be of some use to consider well how far a part this important article of food, for both the sick and healthy, plays in the causation of this frightful and lingering malady, which harasses longer than sunstroke, cholera and such

like suddenly fatal complaints. Pause in the rapid strides of bacteriology and look for a kinsman in the milk of life. Are there not many who, hating to take milk boiled, fancy that heat can not kill this mighty animalcule of milk and of the dirty water which is kindly added to it without much scruple by the "doodh-walla"—truly crying out "Doodh lethoo, doodh lethoo," i.e., no milk, no milk—and that, even after the original bacteria are annihilated, myriads of others are ready to take the place of the first culprit and murderer. Now let us consider how far the milkman (gladly and readily) takes a part in this murder for the sake of his pet bacteria, and this with almost complete immunity from the laws of both the humane bacteria and their European hosts. Now what are the steps taken to protect the Troops from this murder and are they effectual? Besides, the veracity of servants and the pass into barracks is there any other safeguard for a perfect and pure supply of milk to the Troops, even in hospitals which are like priests to the laymen? Are not the tricks of the milk trade well known in the past and present chronicles of milk diet and the number of lives saved thereby? Why do we wonder at "the horror of TOMMY ATKINS at the mere mention of the milk diet" and the Buddhist contempt for milk and its preparations? Cannot the sons of the mighty Bull, worshipped by all Asia, devise something for the supply of good milk to the sons of ALBION, at least, and thus shew their respect to their Lord Bull who was born in a manger near the stone trough, where DAVID used to water his sheep. I pity poor TOMMY ATKINS, whose wages are subtracted by the different arrangements of the regimental canteen, &c., and who, being thus kept in ignorance of the realities of life, yields his life for his loved and loving Queen and the country that lives by him, and him alone! May the authorities in power devise some effectual plan to obtain a pure supply of milk for both officers and soldiers in India is the wish.

Yours, &c., M. VERGHESSE.

CANNANORE, 7th August 1895.

REVIEW.

QUAIN'S ELEMENTS OF ANATOMY; Tenth Edition. VOL. III PART. II; THE NERVES. By PROFESSOR THANE: Edited by E. A. SCHAFER, F.R.S., and GEORGE D. THANE. Publishers, Messrs LONGMANS GREEN & Co., of London and New York: pp. 401. Price 9 Shillings.

The fact that the book has reached its tenth edition is more than sufficient evidence of its utility and popularity. The letter-press is clear, the language explicit and the illustrations so well executed, that the student scarce needs a cadaver to work on when studying his anatomy. The volume includes a copious bibliography of most recent writers and references and leaves nothing unsaid to be desired by either the student or the teacher in the phraseology, appellation and distribution of the various nerve ganglions and plexuses. To say the least we cannot say too much of the value or the scope of the book.

MEDICAL ELECTRICITY. A practical handbook for students and practitioners. By H. LEWIS JONES, M.A., M.D., F.R.C.P., Medical Officer in charge of the Electrical Department in St. Bartholomew's Hospital. (H. K. LEWIS,

186, Gower Street, London, W.C). 8vo., pp. 474, price, 10/6.

The difficulty of managing and fitting up the necessary apparatus as also the scanty technique of practical manipulation being so little taught in medical institutions have made Medical Electricity occupy a much more humble position in therapeutics than it deserves. In the book before us these objections are obviated; as the author has been at great pains to clearly define both theory and practice and simplify matters by means of precise illustrations and intelligible language.

He complains, and justly so, that while fickle France has become constant by maintaining two monthly journals, dealing exclusively with the influence of electricity on the animal frame in disease and the over beset Yank actually supports an energetic Electro-therapeutical Association, England alone is dumb and practically condemns to oblivion or shuts her eyes to what she should put on the highest rung of the ladder of therapeutics.

He treats his subject with a master hand and beginning with the history of electricity splits the work up into fourteen chapters, guiding us carefully through the intricacies of the maze of construction and working of the various apparatus, till he gradually brings us to the human frame of which he explains the physiology and shows the how and wherefore of therapeutic application in common ailments as well as nervous affections such as hysteria, cerebral disease, epilepsy, paralysis &c. Step by step he carries us to the surgical amphitheatre with its huge array of lancets, knives and deadly instruments and, showing how useless the most of these are alongside of the galvanocautery and electrical re-sorption and removal of abnormal growths, he takes us to the death-chamber where he assures us that in the absence of other testimony or even in corroboration or contradiction of such oral or written evidence tendered it is quite possible for the battery to enable the Autopsy-Surgeon to specify correctly the exact time at which death had occurred and gives us convincing proofs that when all other means had failed to detect suspended animation in cases of apparent death electricity had stepped in and prevented the victim from being buried alive.

Direct application of electricity to many of the animal and vegetable poisons decomposes and renders them inert; but, although it is still an open question as to whether these same reactions will take place when these substances are injected into or absorbed by living tissues, Dr. Jones declares that electrolysis acts wonderfully on the mineral poisons and quotes authentic instances of arsenic and lead poisoning where the patients' lives have been saved, and the whole of the poisonous metals abstracted from their tissues, by subjecting them to the electric bath.

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GOVERNMENT OF INDIA.

The undermentioned candidate has passed the M.D. Exam. — Hemchandra Sen, Hosp. Asst. Bepin Bihari Bose, Mirza Muhammad Sajid, Muhammad Jwa, and Raja Darsi Stain were apptd. third class Hosp. Assts. from 27th March to 9th, 13th and 14th July, 1895, respectively.

Third class Hosp. Asst. Mahabadi, Bhandari, and Komallal Soodchand, resign their appts. from 1st March and 21st April 1895, respectively.

Second class Hosp. Asst. Imad Hussain, of Shikarhpur, in Maywar, died 27th May 1895.

Ajodhya Parahad and Madan Lal, of Agra Med. School, to be 3rd class Hosp. Assts. from 1st May 1895.

Rahim But to be 3rd class Hosp. Asst. from 1st Oct. 1895. The following 3rd class Hosp. Asst. are allowed priv. leave:—

Jadunath Bhowar from 11th April to 21st May 1895; Muhomed Waizul Haq, from 28th April to 22nd June 1895; Brij Bashi Lal, from 14th Feb. to 31st March 1895; Govardhandass Bunchhodias, from 22nd April to 21st May 1895; Syed Mushtar Ali from 26th April to 15th May 1895; Haddi Karim Ahmad, from 11th May to 10th July 1895; Abdul Shakoor, from 22nd April to 18th July 1895; Shiva Shunker Khushalrai from 18th June to 8th July 1895; Sheikh Fazeelat Hussain from 15th May to 14th June 1895; Ram Gopal from 1st March to 31st April 1895; Muk Singh from 4th March to 3rd May 1895; Raja Ram Singh from 26th June to 25th July 1895; Alimuddin Khan from 28th May to 15th July 1895; Ghassai Ram from 19th Feb. to 3rd April 1895; Afimullah from 22nd June to 31st July 1895.

The following 2nd class Hosp. Asst. are allowed priv. leave. Desu Ram, from 16th April to 28th April 1895; Luchmon Das 7th April, from 26th April 1895.

Third class Hosp. Asst. Sakharan Vaman Ranade granted two months' leave (m.c.) from 15th Feb. to the 14th April 1895.

Third class Hosp. Asst. Muzhur Hussain, Hanumangarh Diap., granted fifty-five days' priv. leave from 3rd July.

Third class Hosp. Asst. Syeedooddin, Shahabad Diap., granted leave for three months and nine days, from 15th Dec. 1894 to 23rd March 1895.

Third class Hosp. Asst. Kishori Lal, Iklera Diap., granted extraordinary leave from 24th April to 28rd July 1894.

First class Mily. Asst. Surgn. J. T. Weston is placed at the disposal of the Punjab Govt.

Surgn.-Col. W. P. Warburton, M.D., Insp.-Genl. of Civil Hosp. N.-W. P. and Oudh, is granted priv. leave for two months and six days, from 14th Aug. 1895.

Brig.-Surgn.-Lieut.-Col. Andrew Barry, M.D., I. M. S., 6th Regt. Bombay Cavalry, retires from 31st Aug. 1895.

Surgn.-Lieut.-Col. A. S. G. Jayakar, I. M. S., Bombay, held charge duties as Political Agent at Maskat, in addition to his other duties, from 19th April to 22nd May 1895.

Surgn.-Capt. J. B. Jameson, M.B., I. M. S., Bombay, offt. as Med. Officer of the 2nd Regt. C.I. Horse, and of Goona Political Agency, vice Surgn.-Maj. R. J. Baker, M.D.

Brig.-Surgn.-Lieut.-Col. B. Franklin, Surgn. to H. E. the Viceroy, to be Insp.-Genl. of Civil Hosps. in the Panjab, in addition to his own duties, vice Surgn.-Col. D. O. C. Baye, on leave.

Surgn.-Capt. H. J. Dyson, Depy. Sanitary Commr., Panjab, is apptd. Sanitary Commr. Bengal, from the 29th August 1895.

Vety. Lieut. R. L. Cranford, Sapdt. Civil Vety. Dept., S. Panjab, is granted furlough (m.c.) in India from 6th May to 11th July 1895, and out of India from 12th July 1895 to the 9th January 1896.

Promotions:—Surgn.-Lieut. James McNaught to be Senr. Asst. Surgn. ranking as Surgn.-Capt. from 1st Dec. 1894.

Asst. Surgn. Charles Atkins, to be Asst. Surgn. with rank of Surgn.-Lieut. from 1st Dec. 1894.

Surgn.-Lieuts. Patrick Balfour Haig, M.B.; Thomas William Archer Fullerton, M.B.; Ralph Henry Maddox, M.B.; Edward Victor Hago, M.D.; Harry George Melville, M.B.; Arthur Oldham Hubbard, Charles George Robson Scott, M.B.; Herbert Austen Smith, M.B.; Douglas Richard Green, M.B.; George Melver Campbell Smith, M.B.; Hubert Mallon Farie Joseph George Halbert, M.B. to be Surgn.-Capt. from 27th July 1895:—

Surgn.-Capt. Arthur Owen Evans, Mackintosh, Alexander Thomas Colles, William Henry Quicke to be Surgn.-Maj. from 31st March 1895.

Surgn.-Maj. to be **Surgn.-Lieut. Col.** from 31st March 1895
George Tucker Thomas, Arthur James Sturmer; Arthur
Adams, M.B.; Arthur Henry Coles Davis, M.B.; John Philip
Gunnery, M.D.; George Edward Eaton Burroughs, James
McGaughey.

Surgn.-Lieut. J. G. Hulbert, M.B., is granted privilege
leave for sixty days, from the 19th Aug. 1895.

**Second class Hosp. Asst. Yueni Narain, Deoli Agency
Hosp.**, was promoted to 1st class, from 1st Oct. 1894.

**Third class Hosp. Asst. Nazoor Khan, Geyan Chand, Raj-
gadh Dispy.** in Ulwar, were promoted to 2nd class, from 15th
April, 1895.

**Third class Hosp. Asst. Mehdi Hussain, Khanpur Dispy.,
Kotah**, promoted to 2nd class from the 1st Oct. 1894.

The following **Hosp. Assts.** are entitled to draw for English
qualification allowance —

**First class Hosp. Asst. Hushmut Ali, Nawa Dispy., Marwar,
1st Oct. 1894.**

**Second class Hosp. Asst. Mehdi Hussain, Khanpur Dispy.,
Kotah**, from 15th April, 1895.

First class Milly Asst.-Surgn. J. T. Weston is placed at the
disposal of the Punjab Govt.

**Vety. Lieut. R. L. Cranford, Supdt. Civil Vety. Dept. South
Punjab**, is granted furlough of **M. C.** in India from 6th May
to 11th July 1895, and out of India from 12th July 1895 to
9th January 1896.

BENGAL GOVERNMENT.

Dr. R. M. Blaker made over charge of the Dinajpur Jail
to **Asst. Surgn. K. N. Banerjee** on the forenoon of the 1st
Aug. 1895.

Surgn.-Maj. T. R. Macdonald made over charge of the
Chupra Jail to **Asst. Surgn. Upendra Narain Roy** on the after-
noon of the 27th July 1895.

Asst. Surgn. Upendra Narain Roy made over executive
charge of the Chupra Jail to **Mr. J. C. Twidell** on the fore-
noon of the 28th July 1895.

Mr. J. C. Twidell made over charge of the Chupra Jail to
Dr. R. M. Blaker on the afternoon of the 5th Aug. 1895.

Asst. Surgn. Baroda Kanto Roy is apptd. to have
tempy. med. charge of the Demagri outpost during the
absence, on deputation, of **Asst. Surgn. Sasi Bhusan Banerjee**,
or until further orders.

Asst. Surgn. Sasi Bhusan Banerjee, in med. charge of
Demagri, is apptd. to the tempy. med. charge of Lungleh, in
the South Lushai Hills, during the absence, on leave, of
Asst. Surgn. Nripendra Nath Basu, or until further orders.

Asst. Surgn. Nripendra Nath Basu, in med. charge of
Lungleh, is allowed leave for three months.

Asst. Surgn. Chuni Lal Nandi is apptd. to do duty at
the Med. Coll. Hosp., Calcutta, until further orders, with
effect from the forenoon of the 11th August 1895.

Asst. Surgn. Ganes Chandra Mitra is apptd. to act as
a Medical Officer, attached to Eastern Bengal State Railway
at Kanchrapara, during the absence, on leave, of **Milly. Asst.
Surgn. J. Bowley**, or until further orders.

Asst. Surgn. Jogendra Nath Bose is apptd. to have
tempy. med. charge of the Bhagalpur Dispy., during the
absence, on leave, of **Asst. Surgn. Nemat Churn Chatterji**,
or until further orders.

Asst. Surgn. Nemat Churn Chatterji, of the Bhagalpur
Dispy., is granted furlough for one year.

**Asst. Surgn. Kanya Lal Sanyal, Offg. Teacher of Medicine
and Midwifery in the Dacca Med. School**, is confirmed in
that appt. with effect from the forenoon of the 26th May 1894.

Asst. Surgn. Upendra Narayan Roy of the Chupra Char-
itable Dispy. held med. charge of the civil station of Sarau
from the afternoon of the 27th July 1895 to the after-noon
of the 5th August 1895, in addition to his own duties.

PUNJAB GOVERNMENT.

Dr. D. N. P. Datta made over charge of Hoshiarpur
Jail to **Asst. Surgn. Atar Chand**, on 31st June 1895.

Surgn.-Maj. J. Shomer made over charge of Kohat Jail to
Surgn.-Capt. F. R. Oswald, on 15th July 1895.

Surgn.-Capt. Hooks made over charge of Bannu Jail to
Surgn.-Maj. S. F. Rigger, on 22nd July 1895.

Surgn.-Maj. D. O'C. Baye and **Brig.-Surgn. Lieut.-Col.
B. Franklin** made over and received charge of **Imp.-Genl.
Civil Hosp.**, Punjab, on 15th Aug. 1894.

The furlough granted to **Surgn.-Maj. J. O'Sullivan**, is extended
six months.

Native Doctor Abdul Samad is admitted as **Hosp. Asst.,
3rd class**, from 3rd Aug., and will do duty at the Mayo
Hosp., Lahore, from that date.

Second class Hosp. Asst. Siddiknas Nighi is transferred to
the Mooltan Dist. Jail, from 5th Aug., to relieve 1st class
Hosp. Asst. Dewa Singh, granted one year's furlough.

Third class Hosp. Asst. Ganesh Batta relieves 1st class
Hosp. Asst. Sher Shah, at Pakpattan Dispy., Dera Ismail
Khan Dist.

Third class Hosp. Asst. Galam Nahi is transferred to the
Lakki Dispy., Bannu Dist., relieving 2nd class **Hosp. Asst.
Abdul Gafur**, re-transferred to the Mooltan Police Hosp.

Third class Hosp. Asst. Harbhagwan Das is transferred to
the Nub Dispy., Gurgaon Dist., on 1st Aug., relieving 3rd
class **Hosp. Asst. Guru Das**.

Third class Hosp. Asst. Ganga Ram, N-W. Ry., Lahore, to
rejoin the service on 29th July 1895.

First class Hosp. Asst. Amir Shah, is transferred to **N. W.
Ry., Lahore**, vice 3rd class **Hosp. Asst. Ganga Ram**.

On return from leave 3rd class **Hosp. Asst. Ata Muhammad**
resumed charge of the Tibbi Dispy., Montgomery, on 3rd
Aug. 1895.

Third class Hosp. Asst. Guran Ditta, having passed the
English Qualification Exam., is entitled to the higher grade
pay from 31st July 1895.

Third class Hosp. Asst. Jowahir Singh relieves 3rd class
Hosp. Asst. Mula Mal at the Kabirwala Dispensary, Mooltan
Dist.

Third class Hosp. Asst. Mula Mal, from the Kabirwala, to
the Kahror Dispensary, Mooltan Dist., to relieve 3rd class
Hosp. Asst. Rura Mal.

**Third class Hosp. Asst. Rura Mal, Kahror Dispensary,
Mooltan Dist.**, is permitted to resign the service from 1st
August 1895.

**Asst. Surgn. Ala Jawaya, Junior House Surgn, Mayo
Hosp., Lahore**, to the Haripur Dispensary, Hazara Dist.,
to relieve **Asst. Surgn. Devi Dial Mehta**.

**First class Hosp. Asst. Zulfiqar, Shabkadar Dispy.,
Peshawar Dist.**, three months' privilege leave from 31st July
1895 on relief by 3rd class **Hosp. Asst. Sheikh Ahmad**
from Gujranwala.

Third class Hosp. Asst. Thanoo Ram relieves 2nd class
Hosp. Asst. Sultakhan Singh, at the Ludian Dispy., Mooltan
Dist.

The following tempy. exchange of appts. of **Hosp. Asst.**
was made in the Shahpur Dist. at their own expense —

First class Hosp. Asst. Chanan Shah, Bhera Dispy., is per-
mitted to exchange with 1st class **Hosp. Asst. Nanak Chand**
at the Sahiwal from 22nd April to 22nd July 1895.

Third class Hosp. Asst. Hari Chand, in charge of Nadri
Dispy., Rohtak Dist., draws higher grade pay from 27th
July 1895.

Third class Hosp. Asst. Amir Khan is posted to the Tangi
Dispy., Peshawar Dist., relieving 2nd class **Hosp. Asst.
Abas Ali Shah**, on three months' privilege leave.

MADRAS GOVERNMENT.

The Queen has approved of the retirement from the service
of the undermentioned officers:—

Madras Medical Estab.—**Surgn.-Col. A. Porter, M.D.**
date 10th July 1893.

Surgn.-Capt. Wilfred Constant Vickers, M.B., to act as
District Med. and San. Officer, Kistna, vice **Surgn.-Lieut.-
Col. A. J. Sturmer** on other duty.

M. R. Ry. Melapore Paravaram Nalcker Avargal to act as
Civil Surgn., Ocanada, till further orders.

Lorade Chalka, M.D., to act as Civil Surgn., Chattrapur,
vice **Asst. Surgn. J. W. Prichard** on leave.

Benjamin F. Gonsalves to act as Asst. to Dist. Med. and
San. Officer, Belary, vice **Asst. Surgn. E. L. Chalke, M.D.**

Civil Ap. Hy. Benjamin F. Powell, M.D., C.M., to act as Ld. Med. Off. and Surg. Officer, Ganjam, vice Asst. Surg. J. P. Chinnay.

Civil Ap. Hy. Francis T. Watson, L. M. S., to act as Asst. to Dist. Med. and Surg. Officer, Salem, vice Asst. Surg. M. Thomson Singh, M. S.

BOMBAY GOVERNMENT.

The following 3rd class Hosp. Assts. are thus posted:—
Bhimaji Mahadeo Krishna, Dharwar Collectorate, from 21st June; Anandji, to Akola, Dispy. from 18th June 1895; Vishnu Narayan, to Civil Hosp. Thana, 24th July 1895; Ramdasji, to Civil Hosp. Satara, 24th June. Pandharinath, Bhandarkar, to Poona, from the 24th July, Lachasing Sewooing, to Civil Hosp. Shikarpur, 5th July, 1895.

The following 2nd class Hosp. Assts. are posted:—

Nasserwanji Pallonji, to Hansot Dispy., from 24th July 1895; Mulchand Lalchand, to Ghotki Dispy., from 6th July 1895.

First class Hosp. Asst. Easubji Sullimauji, is posted to Parli Dispy. from 24th July 1895.

2nd Class Asst. Surg. Joseph Benson Farrell to be First Class Asst. Surg. and 3rd Class Asst. Surg. Francis Hubert Dean Netecher to be 2nd Class Asst. Surgeon from 19th March.

2nd Class Asst. Surg. Julius Augustus Lobo to be 1st Class Asst. Surg. and 3rd Class Asst. Surg. Louis Joseph DeSouza to be 2nd Class Asst. Surg. 9th March 1895.

The following to be First Class 1st grade. Asst. Surg. I. M. S., from 31 Aug. 1895 Anthony Philip Rodrigues, Julius Eugene Rosario, Joseph Chrispin Praganza.

The following to be Second Class, Asst. Surg. I. M. S., First Grade, from 31st Aug. 1895. Albino Graciano Alphonso, Joseph Alexander Cordeiro, Alfred Henry Ekins, Mathew Lewis Cabral, Celestine Raymond, Louis Xavier Esilva.

The following 2nd Class Hosp. Asst. to be First Class Hosp. Asst. from 2 Aug. 1895. Byramji Jivaji, Musserwanji Pallonji, Asst. Surg. John Williams Shephard is temporarily attached to the St. George's Hosp. Bombay, Dept.

2nd Class Hosp. Asst. Wamon Kassianath, was attached to the Prison Hosp. Bijapur, from 16th March to 20th April 1895.

First Class Hosp. Asst. Babaji Ravat, was posted to Bhujl, from 11th to 15th April 1895.

Third Class Hosp. Asst. Manicoum Subrayam, was on Fair duty, Ulvi, from 4th to 15th February 1895.

CENTRAL PROVINCES GOVERNMENT.

Third class Civil Hosp. Asst. Shrikrishna, attached to Police Hosp., Sambalpur, is temply. deputed on special duty at Ambabhoua.

Second class Civil Hosp. Asst. Ganesh Parshad, attached to Main Dispy., Sambalpur, is temply. posted to Police Hosp. in addition to his own duties, from 28th June.

Third class Civil Hosp. Asst. Nilkant Narian, doing duty under Civil Surgn., Nagpur, is directed to do duty under orders of Civil Surgn., Chanda.

Third class Civil Hosp. Asst. Kazi Fakhruddin, doing duty under Civil Surgn., Nagpur, is directed to do duty under orders of Civil Surgn., Chanda.

On being relieved by Kazi Fakhruddin, 3rd class Civil Hosp. Asst. Nilkant Narian, doing duty under Civil Surgn., Chanda, apptd. to Central Jail Hosp., Raipur.

On being relieved by Nilkant Narian, 3rd class Civil Hosp. Asst. Syad Gulam Nabi, attached to Central Jail Hosp., Raipur, is directed to do duty under orders of Civil Surgn., Nagpur.

Third class Civil Hosp. Asst. Syad Ahmad Ali, doing duty under Civil Surgn., Nagpur, is apptd. to Jail and Police Hosp., Nimar.

On being relieved by Civil Hosp. Asst. Syad Ahmad Ali, 3rd class Civil Hosp. Asst. Ramkrishna Balwant, attached to Jail and Police Hosp., Nimar, is directed to do duty under Civil Surgn., Nagpur.

The aforementioned Civil Hosp. Asst. who are on duty are on duty in the M. P. Dept. have been ordered to do duty under Civil Surgn., noted against their names.

Second class Hosp. Asst. Ambabhoua, to do duty under the orders of Civil Surgn., Sangur.

Second class Civil Hosp. Asst. Surji Rao, to do duty under Civil Surgn., Sangur.

Third class Civil Hosp. Asst. Ramkrishna Lal to do duty under Civil Surgn., Jubbulpore.

Third class Civil Hosp. Asst. Krishna Parshad to do duty under Civil Surgn., Jubbulpore.

Third class Civil Hosp. Asst. Muhammad Siddiq, to do duty under orders of the Civil Surgn., Hoshangabad.

Third class Civil Hosp. Asst. Shrikrishna returned from special duty from Ambabhoua and took charge of his duties at Police Hosp., Sambalpur, from 2nd class Civil Hosp. Asst. Ganesh Parshad on 6th July.

First class Civil Hosp. Asst. Esmam Khan returned from furlough and resumed charge of his duties at Jail Hosp., Chanda, on 8th July, from 3rd class Civil Hosp. Asst. Syed Mahomed Mobin.

Surgn.-Maj. G. F. A. Harris, Civil Surgn., Nagpur, held charge as the Adm. Med. Officer, C. P., from 20th to the 28th March 1895.

Second class Civil Hosp. Asst. Gokal Parshad is dismissed from Govt. service.

Third class Civil Hosp. Asst. Ramkrishna Balwant to do duty with the Civil Surgn., Nimar.

Second class Civil Hosp. Asst. Harendra Chandra Ganguly, held med. charge of Jail and Police Hosp. Betul, from 1st to 14th July.

Third class Civil Hosp. Asst. Pandurang Laxman, posted to the Police Hosp., Chanda.

Hosp. Asst. Syed Mahammad Mohbin is apptd. to the Armory Branch Dispy., Chanda Dist.

First class Civil Hosp. Asst. Gunga Parshad Singh, is apptd. to the Pachmarhi Dispy.

First class Civil Hosp. Asst. Abdul Fatha Khan is apptd. to the Khurai Branch Dispy., Sangur Dist.

Third class Civil Hosp. Asst. Laxman Kishen will do duty with the Civil Surgn., Narsinghpur.

First class Civil Hosp. Asst. Anwar Ali is apptd. to the Jail and Police Hosp., Bilaspur.

Third class Civil Hosp. Asst. Vijja Shankar will do duty with the Civil Surgn., Nagpur.

First class Civil Hosp. Asst. Syed Muhammad Haidar Husain Haidri is apptd. to the Main Dispy., Khandwa.

One month's privilege leave to 2nd class Civil Hosp. Asst. Balbika Parshad Baurji, Mayo Hosp., Nagpur, from 5th September.

Two months' privilege leave to 2nd class Civil Hosp. Asst. Sohan Lal, attached to Jail and Police Hosp., Narsinghpur, from the date he is permitted to avail himself of it.

Third class Hosp. Asst. G. Ramiah Naidu is temply. posted to Jail and Police Hosp., Narsinghpur.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Lieut.-Col. R. A. K. Holmes, Sapdt., Central Prison, Lucknow, privilege leave for one month and seven days, from the 5th Aug. 1895.

Surgn. Lieut. W. Young, Off. Sapdt., Central Prison, Bareilly, officiates as Sapdt., Central Prison, Lucknow, vice Surgn.-Lieut.-Col. R. A. K. Holmes.

Mr. C. Briscoe, in civil med. charge Bulandshahr District, privilege leave for one month from the 1st Sept 1895.

Surgn.-Lieut.-Col. J. McConaghey, Civil Surgn., Lucknow, to Off. Inapt.-Genl. of Civil Hosp., N. W. P. and Oudh, vice Surgn.-Col. W. F. Warburton, on leave.

Asst. Surgn. Abinash Chandra Gupta, to hold civil med. charge Bulandshahr Dist., vice Mr. C. Briscoe, on leave.

Surgn.-Lieut.-Col. G. C. Hall, Offg. Inspector-General of Prisons, M. W. P. and Oudh, to revert to Supdt. Central Prison, Allahabad, on being relieved by Mr John Tyler.

Surgn.-Capt. R. W. Elphick, Offg. Supdt., Central Prison, Allahabad, to be Civil Surgn., Muzaffarnagar, on being relieved by Surgn.-Lieut.-Col. G. C. Hall.

Furlough to Asst. Surgn. Bhagat Ram is extended by six months (m.c.) from 1st Aug. 1895.

BURMA GOVERNMENT.

Surgn.-Capt. K. Prasad made over, and Surgn.-Capt. O. N. Bentley, M. B., assumed, executive and med. charge of Toungoo Dist. Jail on 12th July 1895.

Mr. W. Carr, Asst. Commr. made over, and 1st grade Hosp. Asst. D. Philip assumed, executive charge of Shwegyin Jail on 17th July 1895.

First grade Hosp. Asst. Hen Chandar Banarji made over and 1st grade Hosp. Asst. D. Philip assumed med. charge of Shwegyin Jail on 17th July 1895.

Surgn.-Capt. T. W. Gibbard made over, and Surgn.-Capt. K. Prasad assumed, executive and med. charge of Shwebo Dist. Jail on 21st July 1895.

First class Asst. Surgn. W. H. Cooper assumed charge of duties of Civil Surgn. Thaton Dist. on 25th July 1895.

Second grade Hosp. Asst. Pandit Shankerklass relinquished med. charge with Public Works Dept. Kalaw, at Fort Stedman Road, on 6th July, and assumed charge at Civil Hosp. Thakshian, Southern Shan States, on 12th July.

Second Grade Hosp. Asst. C. Sathasiva Moodelly, on proceeding to Pyapon, Thongwa dist. to give med. evidence, relinquished charge at Police Hospl. Minbu, on 14th July and was detained up to 20th July 1895.

Second Grade Hosp. Asst. C. Sathasiva Moodelly, granted leave on private affairs for one month from 22nd July 1895.

Second Grade Hosp. Asst. D. DeSouza, on transfer to Letpadan, Tharrawaddy dist, relinquished charge of the Jail Hosp. on 23rd July 1895.

Mily. Hosp. Asst. Kutbud-din is transferred to the Civil Dept. Burma.

Hosp. Asst. Abdul Rashid assumed charge of Civil Dispy., Yandon, Thongwa Dist., on 1st Aug. 1895.

Hosp. Asst. Shaik Asghar Ali relinquished charge of the Genl. Hosp., Akyab, 18th July 1895.

Hosp. Asst. Shaik Abdulla transferred from the Hosp. to Police Hosp. Rangoon, 1st Aug. 1895.

Hosp. Asst. No 72, T. N. Bhattercharji, assumed charge, at the Genl. Hosp. Rangoon, on 7th Aug. 1895.

Hosp. Asst. D. DeSouza assumed charge at the Civil Dispy. Letpadan, Tharrawaddy Dist., 29th July 1895.

Hosp. Asst. Syed Abul Khader assumed charge at the Genl. Hosp., Akyab, on 18th July 1895.

Hosp. Asst. P. V. Govindarajoo Moodelly relinquished charge of Police Hosp. Mandalay 18th July 1895.

From 1st Sept. the following Hosp. Assts. in Myaungmya Dist. will hold charge of the lock-up bracketed against their names:—Tatia Khundooje, (Wakema); Ashatooh Basu, (Pantanaaw); P. Ratnam Pillay, (Myaungmya).

Third grade Hosp. Asst. Tijimul Hassan assumed charge of the Police Hosp., Katha, on 1st Aug. 1895.

Third grade Hosp. Asst. Anath Bundu Mukerji transferred to the Mu. Valley State Ry., Mohnyin, Katha Dist., 8th July 1895.

Third grade Hosp. Asst. Bindaban Das assumed charge of the Jail Hosp. Insein, Hantawaddy dist. on 31st July 1895.

Third grade Hosp. Asst. Peary Mohan Barna assumed charge of the Police Hosp., Katha, on 13th July 1895.

Third grade Hosp. Asst. Peary Mohan Barna, on leave (m.c.) for four months, from 31st July 1895.

Third grade Hosp. Asst. Manag Me Nyo, transferred to Mergut on 31st July 1895.

The resignation of 3rd grade Hosp. Asst. R. Srinammala Naidu has been accepted from 12th July 1895.

Third grade Hosp. Asst. Rishan Lal assumed charge at the Contagious Diseases Hosp. Rangoon, on 31st July 1895.

The following 3rd grade Hosp. Assts. assumed charge at the hospitals on the dates opposite their names:—

Thana Ram, Jail Hosp., Mandalay, 24th July 1895.

Abdus Shakoor, Civil Hosp., Ma-u-bin, 31st July 1895.

Sunder Singh, Civil Dispy., Katha, 31st July 1895.

Third grade Hosp. Asst. Sunder Singh assumed additional charge of the Jail Hosp., Katha, on the 31st July 1895.

Third grade Hosp. Asst. Manag Kyaw Lay assumed charge of the Genl. Hospl., Mandalay, on 29th July 1895.

Third grade Hosp. Asst. Shaik Husein assumed charge of the Railway Hospl. Mohnyin, Katha, on 31st July 1895.

The following 3rd grade Hosp. Assts. posted temporarily to the stations noted against their names:—

M. Rajagopaul Moodelliar, Mandalay.

H. Doraswami Pantulu, Tharrawaddy.

P. Govinda Pillai, Pynmana.

J. H. Yeaslian, Minbu.

T. A. Ramaswami Aiyar, Pakokku.

G. O. C. C.

Surgn.-Capt. H. B. Luard, of 22nd Punjab Inf., takes med. charge of the 45 Sikhs, vice Surgn.-Capt. G. H. Frost.

ASSAM GOVERNMENT.

Privilege leave for 24 months is granted to 3rd grade Hosp. Asst. Prasanna Kumar Purkayastha, Nishargard-Mantpur Road Circle, from 1st August 1895.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Rs. 1 for subscribers and Rs. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

MULBONEY—July 21st, at Southwood, Simla, the wife of Surgn.-Maj. T. R. Mulroney, I. M. S., of a daughter.

BAIRD—Aug. 7th, at Musoorie, the wife of Surgn.-Maj. A. Baird, A. M. S., of a son.

HART—Aug. 10th, at Calcutta, the wife of J. Bush Hart, M. B. C. V. S. L., of a son.

BRANDON—Aug. 12th, at Ootacamund, Madras, the wife of Dr. Brandon, Chaplain, of a daughter.

DURRELL-PANK—On the 18th August, at Ajmere, Rajpootna, the wife of Surgn.-Maj. P. Durrell-Pank, of a son.

MARRIAGE.

SEXTON—CONWAY—July 31st, at the Roman Catholic Church, Chakrata, Michael John Sexton, Surgn.-Capt. M. D., A. M. S., to Catherine (Katie), eldest daughter of Captain John Conway, the Duke of Cornwall's Light Infantry.

DEATH.

WHITE—Aug. 2nd, Madras, Willie A. F. White, only son of the late Asst. Surgn. C. W. White, M. D., aged 35 years.

NOTICES TO CORRESPONDENTS.

An Enquirer (Delhi) seeks for information as to the method of examining blood for parasites. We feel sure Dr. Patrick Kehir, F. R. S., will oblige with an article on this subject.

S. K. M. (Bilam).—Try your patient, *give* 10-grain doses of salicylate of soda *t. d.* after meals, and give him 5 grains of quinine at midday and midnight. Diet to be milk and vegetables.

E. J. W. (Sivillipatur).—Your paper to hand. Many thanks. It will receive early attention.

E. S. (Agar).—We think it will be more advantageous if you and your colleagues, who are anxious to join a provision, will send us a letter signed conjointly in the terms of Comment on this subject on page 183 of this issue.

D. W. R. (Yamathu).—Your interesting article has been received.

M. E. D. (Malacca).—We have received your paper.

J. A. De O.—There is a popularly but not properly, so, termed preparation of "Valerianate of Ether." This may be made in one of three ways (a). Dissolving $C_{10}H_{18}$ or essence of Valerian in rectified ether (b) Treating $C_{10}H_{18}O$, HO , (or valerianic acid) with freshly distilled rectified ether (c) Letting a mixture of 4 parts by weight of 80° Alcohol and 2 of 0.728 Ether percolate slowly through 1 part by weight of powdered Valerian Root. But be it remembered that the majority of commercial Valerianates are prepared not as they should be from Valerian but synthetically from Fousel oil, or amylic alcohol.

J. R. D. (Sultanpur). If you have just grounds for your belief and can thoroughly substantiate your statements it is your duty to inform the police. Always keep in view, however, the fact that as a physician the confidence of your patient has to be respected.

T. A. (Gadag). We hope your paper will appear in our next number.

F. S. M. (Mysore).—Your paper to hand and will receive early attention.

Hospital Assistants Madras.—Complain that the grant of free quarters has not yet been made them and they feel this a serious hardship to which we kindly invite the attention of the Madras medical authorities.

H. P. B.—Many thanks for your paper.

Our Readers.—On page 173 of this issue appears a leader "Value of Medical Combination." We mean Value, not value, as some may think; for to our mind a medical combination is to the Profession what the *Valves* of the heart are to the circulation of the life stream.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—American Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indian Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medical-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Gazette

Tribut—Gallard's Medical Journal—Calcutta Journal of Medicine—Scopol—The Practitioner—Medical Standard.

Gazettes of the Governments of India, N.W.F. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Madras and Assam.—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers.—Indian Daily News—Bangalore Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Vision—Indian Empire—Tribune—Indian Planter's Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika—The Sentinel—India—Punjab Patriot—Indian World—Calcutta University Magazine.

Books.—*Quain's Elements of Anatomy.* By Prof. Thane. Edited by E. A. Schafer, F.R.S. and George W. Thane. (Publishers: Messrs. Longmans Green & Co., London.) Price 9s.

Medical Electricity. By H. Lewis Jones, M.A., M.D. (Publisher: H. K. Lewis & Co., 136, Gower Street, London, W. C.) Price 10s 6d.

Literary Contributions and Letters from: Surgn.-Capt. Patrick Helier, M.D., F.R.S.E., F.R.C.S.E., D.P.S., Hyderabad; Asst. Surgn. Arthur H. Nolan, I.M.S., Monywa; Roger G. S. Chew, M.D., C.M., M.S.C., Calcutta; Surgn.-Maj. D. Basu, I.M.S., Mambhum; Rai Kannai Lal Dey, Bahadur, M.C.B., F.R.C., Calcutta; Asst. Surgn. Purda Chandra Das Gupta, I.M.S., Kishewgunj; S. M. Chinniah, C.M.S., Nandura; C. A. Thomman, C.M.S., Tellicherry; Edward Balm, C.M.S., Parbani; Asst. Surgn. A. Beale, I.M.S., S. E. J. Clarke, Esq., Secretary, Bengal Chamber of Commerce; H. H. Risley Esq., Secretary to the Government of Bengal; W. C. Mudge, Esq., Calcutta; M. Verghese, Cannanore and others.

PHENOCOLL IN PREGNANT WOMEN.

After trying this drug for some time in the above condition TITONE finds that though of *inferior* value in malaria, it exerts next to no action, (even in 5-grain doses every 2 hours), whatever on the pregnant uterus. He therefore contends that in phenocoll is found a malarial drug as powerful as quinine *without* the *unfavourable* influence of the latter on pregnancy.

A CASE OF SPONTANEOUS RUPTURE OF THE HEART.

(Szegede). The body of a 67-years old woman, suddenly deceased, was brought to police examination. On the posterior wall of the left side of the heart, at a thinned spot, was a fissure 8 m.m. long, through which about 800 gm. of blood had poured into the pericardium. The immediate cause of death was this rupture. The heart muscle was fatty degenerated, and an endarteritis deformans was present, while both kidneys were shrunken.—*Good Health.*

COURT FEES.

The fees allowed in Great Britain for a medical witness for attending to give evidence in a criminal case are 1 guinea per diem and travelling expenses. No special allowance is made for examinations except in exceptional cases. If no order for payment has been made by the court nothing will probably be allowed.

HEALTH LEGISLATION AND THE NEEDS OF INDIA.

By LEWIS HART, D.M.S.

Editor, British Medical Journal.

THIS is probably the most representative and influential meeting of medical officers of health that has ever assembled in Great Britain. I appreciate the high honor of presiding over it. Two things add to its importance: first, that it meets not as an isolated or powerless body, but as an integral part of that British Medical Association which includes practically nearly the whole of the authorized members of the medical profession in these kingdoms, and certainly all its most authoritative and highly-informed members, both in this country and throughout the British dominions and possessions; and, secondly, that this meeting it will have the power of sending up its final recommendations and decisions to the central executive Council and to the Parliamentary Bills Committee of that Association, and through its machinery of transforming them in due time into the basis of legislative action by bringing them within the sphere of the Government departments, and, if necessary, of securing legislative action. What we do and say here, therefore, will, according to its intrinsic merit, be likely permanently to affect public opinion, and ultimately the municipal and legislative proceedings of the Empire.

The Healthiest City in the World.—Let me offer you welcome and congratulation at meeting here in the metropolis of the world at once the greatest and the most healthy of cities. Since last the British Medical Association met here, progress has been made in the science and practice of public health administration and the prevention of disease which has amounted almost to a revolution. There was then no section of public medicine such as that over which I have now the honor to preside, and the public health service throughout the country was almost in its infancy. The results of the good work done and its great effects on the health and happiness, and therefore on the material prosperity of this great community, as of the country at large, are sufficiently shewn in the bare fact that the mortality of this city has fallen from 22 per 1,000 to 18; whereas but for improved sanitation, due to the advancing knowledge of the methods and principles of preserving the public health, achieved and demonstrated by the medical profession, it would have risen inevitably in proportion to the increasing density of population to at least 24 per 1,000. The science, art, and practice of public health administration are, I am proud to say, almost wholly British; the other nations of the world have, some with vigour and activity, and others slowly but imperfectly, accepted our demonstrations and followed our practice, but for the most part all of them still lag in the rear of British sanitary legislation and administrative practice. In that great advance I am happy to be able to affirm, and we may all take pride and credit in our progress from the fact that a main part

has been played by the British Medical Association, and its members.

The Completion of the Sanitary Law.—The last great conception of the sanitary reform of England was due to our much-lamented Associate, Ramsay, of Cheltenham, a general practitioner of the highest order of administrative genius, who laid down principles and methods, which were partly, but by no means perfectly, brought into play by the Public Health Act of 1875. To him and to a small active band of far-seeing workers, prominent amongst whom were Sir HENRY AINSLIE, Dr. WILLIAM FARR, and Mr. W. H. MONAGHAN, J.L., and with whom I had the honor of being an active co-worker, was wholly due that great report of the Royal Sanitary Commission which laid down the principles and methods of the legislation which has proved so beneficial and life-saving to the millions of this country. It is true, as it is true, that by the efforts of that legislation every man in this country enjoys two and a-half years more of active healthy life than he could have anticipated thirty years ago, and every woman three and a-half years; the debt of gratitude for this great boon is mainly due to the men whose names I have mentioned. Alas! only AINSLIE and myself survive out of this devoted band, to watch and to rejoice over the results achieved and the progress still in course. RAMSAY, FARR, MICHAEL, STUART have gone over to the majority, undistinguished and unknown by their country, and without any of those marks of distinction from the crown which would undoubtedly have fallen to their lot had the destruction of life in lieu of the saving of life been their occupation. Yet I venture to hope that some day their names may be distinguished in the roll of honor—comparatively barren although each posthumous honor may be—and at any rate in our memory and in the records of the profession they will always hold a high place among the benefactors of mankind, among the great worthies of our age. For theirs was good and great work, nobly and well done, for the pure love of mankind, in utter disinterestedness and often to their great loss. Perhaps I alone, who worked day by day alongside of them, can tell how incessant was their labour, how little it was known or regarded, how frequent their baffling disappointments, and how readily they gave way to the statesmen and legislators who finally took up their work and assumed its public sponsorship.

The Blunders of Mr. Stansfeld.—The Public Health Acts, to which were attached the names of Mr. STANSFELD, of MR. SLATER-BOOTN, of Mr. DAWSON, and Mr. CLAYTON HARDY, are very largely only the public formulae of the aims and outcome of our work. It is only true to say that as far as our ideals and perfected schemes were depicted from health legislation and our present sanitary system have been named and are rendered imperfect. To mention only one instance, our system, carefully drawn in all its details, included the creation of large sanitary areas, whose boundaries should be established with a due regard to the watershed, the creation of boards of sanitary districts, the existing sanitary councils for local sanitary administration, and the appointment of these areas of medical officers of health over, amongst others, to have the sole duty of sanitation, safely and free from the temptations and distractions of general medical practice.

and having fully recognised Mr. STANSFELD in his bill recognised three principles, but acted upon them only in a partial and incomplete manner, actuated by the doctrinaire spirit which has so largely interfered with his usefulness as a statesman throughout his career. He insisted on making these arrangements depend upon the intelligence, the generosity, and the far-seeing spirit of an infinite number of small local bodies. It was in vain that as Chairman of the Parliamentary Bills Committee of our Association I urged upon him with incessant and obstinate energy the necessity of making these broad general principles compulsory instead of voluntary. To all remonstrances he answered that "you must trust the people," that his "bill was intended to be educational and not coercive," and "the authorities must learn by their errors as well as by their achievements." "Besides," he pointed out, "you must read between the lines of my Bill. I am offering them all a bribe to do the right thing, and this they will readily accept. We offer to pay one-half of the salaries of the medical officers." I am sorry to say that he was quite obdurate under the sharpness of my remonstrances, and I fear finally the somewhat contemptuous tones in which they were sometimes couched led to a personal coolness which subsequent differences of opinion did not mend.

Mr. Ritchie's County Council Bill.—Mr. RITCHIE'S County Councils Bill did something to repair the blunders of Mr. STANSFELD, but omitted to appoint medical officers to make the work of the county councils effective. We had recourse to the good offices of Mr. STANSFELD to introduce provision for county medical officers which we understood that the Government would be quite willing to accept; but here again Mr. STANSFELD'S doctrinaire views intervened, and I was unable to induce him to word the amending clause so as to make such appointments compulsory. Thus this Bill also was marred in its usefulness. Only a few of the English county councils have appointed medical officers to assist them in their duties, and notwithstanding the conspicuous usefulness of the work of such men as Mr. SHIRLEY MURPHY, Dr. REID, Dr. WHITEKORN, and their colleagues, those most important appointments have only been made in a few cases. Happily I was more successful in dealing with the County Councils Act of Scotland. There, with the help of Dr. FARQUHARSON, Sir CHARLES CAMERON, and co-operating with the Scottish Medical Officers Association, we were able to obtain a compulsory clause and every county in Scotland now has a county medical officer. It is universally recognised that this arrangement is conferring untold benefits upon the sister kingdom. In many other respects, and especially in relation to a combination of sanitary districts, the provision of adequate paid and skilled medical officers over adequate areas, much still remains to be done to complete and carry out the health arrangements of this country as we originally devised them.

The Relation of Health to Water Supply.—The few further words which I have the duty to address to you as utterances from this chair must necessarily be limited to one or two selected subjects from the wide range over which our programme will extend. You will not be surprised if I deal especially with the subject which has

so largely occupied my attention during the last year, namely, that of the relation of poisonous disease to our water supplies; and if, coming as I do from a study of the health conditions of India, I lay some stress upon the sanitary needs of that great empire, and upon the means of dealing with the most pressing of these requirements. It is now exactly thirty years since I succeeded in demonstrating, to the satisfaction of all authorised sanitarians, that the cause of the great epidemic of cholera of 1865 in the East End of London was the temporary breaking down of a single pump in the works of the East London Water Company and the temporary disuse of one filter bed. This breakdown led to the distribution throughout the East End of London of water from the river Lee, which had been for a few days polluted by the discharge from the sewers of the house of a family suffering from relapsing cholera, brought from Egypt to this country. That one strange concurrence of river pollution and inadequate filtering, produced within a few weeks and within a limited area 1,000 deaths. It cost no small trouble to prove indubitably the striking series of facts which were necessary to establish this conclusion on an unassailable basis of evidence. From that time forward, however, I have spared no pains or expenditure necessary to track the various epidemics of cholera throughout the world due to sewage-tainted water.

Cholera a Purely Waterborne Disease.—Thus in 1869 I traced the cholera epidemics of Toulon and Marseilles to the pestilential state of the water-supply, a cause which was not then widely accepted, but has now been so, so that Dr. BROUARDEL, one of our most distinguished converts, has acknowledged that the outbreak of cholera in Marseilles in October 1892 was principally due to contamination of the drinking water by sewage. The same cause is now acknowledged by M. MONON, by Dr. SHAKESPEARE, and by Dr. PROUST to have been operative in the widespread epidemics in Finistère in 1885 and 1886. The sudden outbreak of cholera in Paris in 1892 was undoubtedly due to the consumption of Seine water. Happily the French have now recognised this lesson, and Paris has a water supply which is mainly independent of the Seine, so that no future cholera epidemic is likely to occur there. I have already written the history of the great cholera outbreak at Naples in 1884, and at Genoa in the same year. By a telegram to BRANTINI warning him to investigate the pollution of the water supplied by the Niccolay aqueduct I was able summarily to stop that epidemic.

In the excellent description of the Spanish outbreaks of cholera in 1865 by Mr. GEORGE HIGGINS, the dependence of cholera outbreaks and of the enormous localities attending them in that year upon sewage-tainted water was most conclusively proved. The outbreaks in Russia in 1892, and of the cholera in Hamburg in the same year owed no other cause, and KORT has fully recognised this, so that the improved water supply that Hamburg now enjoys may be counted upon as preventing 2 future cholera outbreaks. I ventured to predict during 1898 that, however often cholera should be imported to this country, it would never become epidemic owing to the improvements in our water supply, but that cholera

of the water supply, and the water supply in towns, ports, and rural districts, and the water supply might be improved, and what the water supply is known or inadequately protected. This doctrine was opposed to the latter. I by no means claim the exclusive credit of having preached and proved the doctrine that cholera is a waterborne disease, due to the poisoning of our water supplies with sewage: that doctrine was first laid down by SNOW, of whom I was the constant apostle. It was illustrated by SIMON with all his wealth of quaint eloquence, but even until a late date it was doubted and denied by some of the most eminent authorities, and the official utterances of the College of Physicians at no distant date were to the effect that it was not probable that in the case of cholera the influence of water would ever be shewn to consist in its serving as a vehicle for the poison generated in the bodies of those who had suffered from the disease. So late as 1866, immediately prior to my assuming the editorship of the *British Medical Journal*, that journal declared that "we do not believe a single case on record either proves or justifies the fact that a man's stomach, then and there produced cholera in him." The theory that cholera is wholly, essentially, and universally a waterborne disease is wholly mine; and if it is, as I believe it to be, now universally accepted, I venture to say that this acceptance is due to the laborious persistence with which I have accumulated the proofs of it from every part of the world, and have repeated them in my addresses to the profession on this subject, in America, in India, as well as in this country. That doctrine is now becoming common place in Europe at least; although, as I shall presently have to state, it is still ignorantly resisted in India, to the great peril and sacrifice of hundreds of thousands of lives of our fellow-subjects. But even in England our water supplies are still in too many places scandalously and dangerously tainted, and the result is shewn in that prevalence of typhoid which is, as I contend, not less surely and inevitably traceable to a polluted water supply than is cholera itself. All that has been done and is being done to ward off cholera is in like measure operative in my view of the facts to prevent typhoid.

Waterborne Typhoid.—In the reports on waterborne typhoid which I am now publishing in the *British Medical Journal*, I have investigated the data in respect to 206 distinct outbreaks of typhoid fever in this country from 1871 to 1890, and from these reports it will be seen that they are all of them due to neglects of the water supply. In that period upwards of a hundred millions have been spent in improving our water supplies, and with the result: that whereas the mean annual death-rate per million living from those two diseases was, as stated by Dr. THOMAS THORNE, 567 in the five years 1869—73, it was only 179 in the five years 1888, 92, so that during the year 1892 alone no fewer than 14,282 persons escaped death from such fever who would have died if they had been living under the regime of 1869. Only a million lives have been saved during the period in question by the improvement mainly of our water supplies. To take a few examples only: At Manchester, from the annual death-rate from enteric fever of 1,214 per 10,000 prior to the improvement of

its water supply, fell afterwards to 83. At Chelsea the fall from the same cause was from 15 to 84, at City from 104 to 14, at Fenchurch from 10 to 4, and at Finsbury from 14 to 4. To show an enormous extent, I still provide my report, to which I venture to refer you, gives abundant and astounding evidence, and it is still further emphasised by the continued prevalence of typhoid fever in this country, which, however diminished, is still diabolical and discreditable to our sanitary authorities. London itself is continually in danger, and will remain so, so long as we continue to draw our water supplies from the Thames, which is subject to enormous and dangerous, though variable, pollution with sewage. No sewage-tainted water can ever be employed with safety for the supply of any community, great or small, although of course the variability of the extent and the specific character of the pollution lead, together with seasonal influences and changes of temperature, to fluctuation in the number of typhoid poisonings which the water effects. Every case of typhoid, is in fact, a violent death, an example of water poisoning, and should be the subject of sanitary inquest.

Indian Sanitary Needs.—If we turn to India, that great empire in respect to which we have such immense Imperial responsibilities, the case is still stronger, and naturally the needs are far greater. Unhappily there has been and there is still the most ignorant and monstrous opposition to the diffusion of our modern knowledge on this matter, to its application to Indian sanitation. A stolid resistance—to use the appropriate words of Mr. MACNAMARA—of the water theory of cholera was long offered by those in authority. Surgeon-General CONNINGHAM, Sanitary Commissioner to the Government of India, in his report for 1872, said: "That it would be a gross exaggeration, as it would be pure assumption, to affirm that the troops and other communities who were attacked suffered because they drank water which had been contaminated with cholera discharges." And again: "The belief in the dissemination of cholera through water is founded on bare assertions altogether unsubstantiated by details—bare assertions such as would not be received by any judicial court, even in the pettiest case that could be brought before it." Unhappily outworn views of this obstinate and tyrannical "Sanitary Commissioner" who enjoyed a long lease of official power have swayed official opinion.

Stolid Resistance and Antiquated Prepossessions.—Unhappily “stolid resistance” and antiquated prepossessions such as this far are more seriously important in India than they are or ever could be here; for under the system of medical organisation which exists in India, one man in high place, such as Surgeon-General CUNNINGHAM, may dominate and intimidate the whole system. Indian sanitation is not a scientific but an official system. There does not exist there any independent medical opinion. All are in the employ and under the thumb of a official authority. The oldest man in the service are the highest in official position. Their ignorance is often the standard by which their juniors are judged, their prejudices become a despotism, and their follies a tyranny. It

was for a long series of years as much as a man's promotion was worth to dare to avow the opinion that cholera was a waterborne disease, and that it was carried from place to place along the lines of human communication. The idea that it was spread and diffused by great concourses of people becoming infected by the sewage-tainted water of religious festivals was treated as not only a folly, but an offence. The two things may be concurrent, said an eminent official wiseacre, but it is a wild absurdity to treat them as cause and effect. Unhappily this gentleman still holds high office at an advanced age.

A Disgraceful Public Document.—And so it is that until lately Indian medical officers who dared to accept the patent facts and to aver that particular outbreaks of cholera, of typhoid fever, and of dysentery, were due to contamination of the drinking water, were subject to persecution. Medical officers of all grades were expected to show respect to their seniors by invoking, as the efficient causes of cholera outbreak, telluric influences, pandemic waves, epidemic constitution, cholera mists, blue clouds, cholera blasts, the influence of trees and such like bogies. Nor is this influence yet extinct. Shameful to say, the Army Medical Regulations for the management of cholera are still produced and reprinted under the same death-dealing and ignorant superstition. All the most patent facts of our knowledge concerning cholera are still ignored, and in that scandalous public document, which is still supposed to be the handbook of our medical officers, cholera is treated as a contagious and mysterious disease, of which the origin is unknown, of which the very advent is to be the signal for panic and scare. On the appearance of cholera the hospital or the barrack is to be evacuated, troops are to be marched away to a distant cantonment, at right angles to the wind, they are to be collected together and amused by games and entertainments, daily reports are to be telegraphed hither and thither to distant high officials, while the most obvious precautions as to boiling the water, quarantining and examining the native servants, the cooks, and the food supplies, are omitted altogether or only cursorily alluded to. I cannot weary your patience by criticising in detail this most disgraceful document, but I may in passing appeal to the heads of the Indian Medical Service and of the Army Medical Service here to withdraw so discreditable a document, and one so dangerous, not only by its direct teaching but by its indirect influence.

Appalling and Ill-digested Reports.—I am ashamed to say that until my recent visit to India I was so repelled by the appalling mass and ill-digested and uninformative arrangement of the sanitary reports of the Commissioner to the Government of India and of the Indian and British Army Medical Service, that I could never even bring myself to read them, and I doubt whether any one in this country has read them, with any care or attention. Their arrangement alone is a very height of absurdity. They are so artificially divided, and so ill arranged, that it is almost impossible to trace the sanitary history of any body of troops or of any regiment, and when one comes to read the comments and reports upon them of the sanitary officers of provinces, or of army

medical officers, one can read in every line intense discouragement, a mere weary compliance with the duty of filling in innumerable foolish returns, and a disgust with a system which has apparently been dictated in the pure spirit of what may be called book-keeping, and without any knowledge or regard to the needs of sanitary science and practice. The last vast and bulky Blue Book issued by Surgeon-General RICE, who has just vacated the office of Sanitary Commissioner to the Governor-General of India, is a good example of the costliness, the futility and the impotence of the present system. I defy anyone to extract from it any useful information as to the origin, diffusion, and means of extinction of any single epidemic of cholera or typhoid during the year in India. There is no mention of filtration of water or of boiling of water, or of the examination of food supplies, or of anything which one wants to know. There is an utter absence of the scientific spirit, and a still more complete absence of any practical proceedings. I was only, when in India, able to find evidence of the adequate investigation, and of adequate means of extinction, of any single cholera or typhoid outbreak amongst the troops in three reports, and they were all the reports of one man—Professor HANKIN, of Agra. In each case they distinctly shewed the outbreak of typhoid or of cholera, at Lucknow, Cawnpore, and Agra respectively, to be due to infected water, to milk poisoned by infected water, or to infected food supplies, and they pointed conclusively to the simple and easy means of extinction. One looks in vain in the vast Blue Book of Dr. RICE for any such intelligent appreciation of the causation of cholera and of typhoid, and in his comments that highly placed and distinguished officer passes over the work of the investigation of Professor HANKIN with a cursory, depreciating, and misleading allusion to it. There is in the whole of India, with the single exception of Professor HANKIN's laboratory at Agra and of the municipal laboratory of Dr. SIMPSON* at Calcutta, no provision for that bacteriological study which is now the first element in sanitary efficiency. In the whole of the Bombay, Madras and Burmah presidencies there is no skilled water examiner and no bacteriological laboratory. This seems incredible, but it is literally true.

The Discouragement of Sanitary Studies by the Government of India.—Medical officers are not even allowed microscopes, and if when they supply them at their own cost they apply for the necessary and inexpensive stains and other minor apparatus necessary for their efficient use, they are told that these are no part of a medical officer's equipment or duty. The sanitary commissioners and assistant commissioners of India are for the most part army medical officers who have had no special training, who are liable to frequent removal and diversion to other duties, and the sanitary officers of great districts are habitually overloaded with an immense category of duties which would make it impossible for them to fulfil their duties of health officers even if they were unguilted from

* Designed and fitted up by the municipal analyst, Dr. August G. Chav, with the assistance of Mr. J. D. Jones in 1900-1.—J. M. A.

† Can this be true? How about the office of the Chemical Engineer of these presidencies?—J. M. A.

made in the whole system and of the administration, the great sanitary needs of India will never be met. You will pardon me for occupying you with a subject which may seem to be in part foreign to our immediate work, out which is of vast moment to the health of a great population in our Indian dominions.

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**IS STRYCHNINE OF ANY VALUE AS AN
ANTIDOTE TO KRAIAT, DABOIA,
OR ECHIS POISON?***

By SURGEON-CAPTAIN ROBERT HENRY ELLIOT, M.B., B.S.,
London, F.R.C.S. England, D.P.H.
Cambridge, &c., I.M.S.

Acting Professor of Biology, Presidency College, Madras.

LAST October it was my privilege to read before the South Indian Branch of the British Medical Association a paper on the value of strychnine as an antidote to cobra poison. To-day I propose to lay before you the work, which I have subsequently performed in an endeavour to ascertain, whether the reputed antidote was of any value, in the treatment of the bites of the other common poisonous snakes of Madras, which, as we all know, are the daboia, echis and krait. There is a further point that leads me to address you again, *viz.*, that since the publication of my last paper, a number of fresh cases have appeared. These consist of scattered records in the various journals, and also of a most interesting series of cases by Surgeon-Lieutenant-Colonel JOSHUA DUKE, in his paper read before the Medical Congress last December. I propose, gentlemen, after describing to you the results of my recent experiments, to critically review these different cases:

In order to obtain a stable basis, on which to work, let me premise my remarks, by a few words on the symptoms, etc., of poisoning by the krait, daboia and echis. A comparison of the experiments now discussed with those recorded in my previous paper will shew how strikingly similar are the symptoms of all the various forms of snake-poisoning.

To begin with that of the krait. In this a marked feature is a great tendency to tremulousness, twitching and convulsions, a condition being thus attained, which so closely simulates strychnisation, that in cases, where the nikaloid had been injected, it was at times difficult, if not impossible, to be sure whether the symptoms of motor excitement observed were due to the drug or to the venom. To this very important point I shall again allude later on. Salivation, as a symptom, was conspicuous by its absence, but in some of the monkeys, peculiar chewing movements were noticed, which suggested that the animal had something in its mouth, which it was unsuccessfully trying to expel. Possibly this was viscid saliva.

The typical symptoms of cobra poisoning in monkeys, as described in my previous paper, were repeated exactly in the krait-poisoned animals. I refer to the drowsiness, the drooping of the eyelids, the drunken-like inco-ordination, and the apparent delusions. Where life was sufficiently prolonged, intestinal hæmorrhage occurred. This

was rarely manifested, during life, by blood in the stools, but a post-mortem constantly revealed submucous extravasations of blood, except when the animal died, almost at once, from an overdose of the snake-poison. A subcutaneous jelly-like bloody extravasation around the wound was also a constant feature.

Now as to the symptoms and signs of daboia-poisoning. Here again one finds a tendency to motor excitement as the result of the injection of the venom, but I must confess that this phenomenon was not so well marked as the records of other observers had led me to believe. Nor was I able, in any case by tapping the forehead, or by any sign the animal exhibited, to ascertain the presence of 'the severe frontal headache of viper-bite.' The snakes I used were very fine daboias, and the poison was injected usually about three days after its expression from the dissected glands. The symptoms noticed in a dog bitten by a daboia were precisely similar to those observed in the animals, into which the poison was injected by a syringe. I confess myself at a loss to explain the difference between my own observations and those of other writers, and can only record facts and leave them as they stand for the present. One more point there is, and on this I speak with less hesitation. I refer to the fact that dilatation of the pupil was, in my experiments, very far from a constant sign, whilst others have laid much stress upon it. When the animal survives long enough, hæmorrhage from the bowel takes place, and if life is still further prolonged, most offensive melanic stools are passed. Salivation, though noticed in one case was by no means the rule.

In monkeys, the classical symptoms already alluded to were constantly present.

A very striking point was the extensive spread of the local lesion. The red-currant-jelly-like substance was far more plentiful than in cobra-poisoning. It tracked for a great distance along the lymphatics and apparently also spread directly in the planes of cellular tissue. Even where it appeared to follow the lymphatics, the cellular tissue surrounding these shewed marked changes of the same inflammatory character, presumably from the direct osmosis of the poison through the vessel walls. This venom appears to me to be both more irritative and more diffusible than the colubrine poison.

From the above brief review of the leading symptoms of snake-poisoning, we turn to the consideration of the effect of Dr. MULLER's antidote.

Surgeon-Lieutenant-Colonel D. D. CUNNINGHAM in his excellent paper on this subject, before the Medical Congress at Calcutta, made the following incisive remarks:— "There is one somewhat quaint point in regard to the belief in the efficiency of the salts of strychnia as antidotes for snake-venom. Its adherents seemingly regard these salts as constituting a universal panacea against the action of all kinds of venom. But this implies a belief that in some cases they act homœopathically, and in others allopathically, for in cases of acute viperine poisoning, the symptoms in many cases are those of extreme irritation of the nervous centres, whereas in cases of cobra poisoning, they are indicative of nervous depression. The symptoms of acute viperine poisoning in many cases are practically

* Read before the South Indian Branch of the British Medical Association and sent to the Record for publication.

identical with those of acute strychnia-poisoning, and yet it is strenuously proposed to endeavour to induce the latter in order to save the former."

These words I can heartily endorse, and my grounds for so doing I will now shew you that the strychnised animals died sooner than those which we allowed to cope with the snake poison alone; but this is not all, and to the following point I particularly beg your attention. In this series of experiments I was determined that strychnine should have its fullest chance; accordingly the experiments were made in pairs or in fours, and the venom was equally divided between the two or four animals. In each set of experiments the animal, which suffered first and most severely, was made the control snake-poison experiment, while the animal, which by reason of greater body-weight, greater life-force, or other circumstances, was the slower to feel the effects of the poison, and which, therefore, *ceteris paribus*, would have been the longer in dying, was used for the antidotal test. This method of operating brought out a very striking point, and absolutely supported Dr. CUNNINGHAM's remarks, for in every case, very soon after the alkaloid was administered, the animal rapidly became markedly worse, and as you will see, generally died before its weaker neighbour. I may say that these experiments were carried out before I saw Dr. CUNNINGHAM's paper, and I had the honor independently to arrive, on practical grounds at the same conclusion that that observer's acumen led him to adopt from theoretical considerations.

The weight of the animals were practically identical, they were both in good health, the snake-poison was accurately weighed, and evenly divided between the two dogs. Strychnine was given to one, on Dr. MUELLER's plan of full doses, and the animal whose hap it was to be treated, succumbed to the combined influence of venom and alkaloid.

The remaining animal fought its battle uninterfered with. In twenty-four hours it was as well as ever, and at the end of a week it rejoined its village companions, in decidedly better condition than when it entered my compound! Needless to say I refer the improved condition to regular food, and not to the snake-poison.

While one animal apparently owed its death to the combination of virus and remedy I can confidently state that, from beginning to end, I never saw one atom of benefit derived from the administration of strychnine. In no single case were the symptoms even temporarily removed, and I do not hesitate to say that, while I believe the so-called antidote to be useless, or worse than useless, in cobra poison I go farther, and consider that, with the facts before us, its administration in krait or viperine poisoning must be, if not malpraxis, at least a grave surgical error very difficult to defend. I am aware that I am speaking strongly, but I have chosen my words after careful thought, and in the belief that in so doing, I am discharging a duty, which I may not leave undone.

Now a few words on the echis. There seems always to have been a good deal of dispute about the virulence of the venom of this snake. FAYRE considered it a dangerous viper; some of his correspondents called it deadly, others have thought lightly of its bite. The echis, of these parts, seems to be a much smaller reptile than the specimens met with up North.

FAYRE speak of a fine specimen 22½ inches long. Dr. B. P. BANERJI kindly sent me several specimens, which are considerably larger than those met with in these parts. Out of seven specimens, I have secured here, the longest measured 15 inches. Dr. BROWNING and Dr. HENDERSON tell me that their usual size in Madras does not exceed this measurement. The echis is a very vicious little viper, and can always be relied on to bite at a minute's notice.

I endeavoured at first to extract and inject the poison as I had done with the other snakes, but the combined venom of three specimens of echis was only sufficient to kill two guinea-pigs, and that too after a delay of about seven hours. I accordingly experimented on dogs, making the vipers bite the dogs. In no case did I succeed in killing a dog by means of the bite of a single viper, though one dog bitten by four vipers in different places succumbed in 8½ hours.

With the exception of the local swelling, the symptoms in this case were by no means pronounced. The dog became ill and died, much in the same way as if cobra-bitten, but as it was not closely watched in the last 4 to 4½ hours of life, I would not lay stress on the absence of convulsions, etc.

I may mention lastly an important point which is, that in the course of a talk with a gang of snake-men, I asked if they considered the echis—a specimen of which they had just brought me—deadly or not. They ridiculed the idea of a man dying from its bite, and prophesied that a dog bitten by these snakes would not die, the damage being confined to great swelling of the bitten part. My results amply justified their confidence. In order to prove to me its harmlessness, one man volunteered to be bitten by an echis. I asked each of the four present in the gang, if they would consent to be bitten, and received a willing affirmative in each case. Thinking that they might be "bluffing," and not wishing to push the matter too far, lest they really should be bitten, I gave them another test by saying—'No I don't want to see you bitten by echis, but will you let that snake (a daboi) bite you!' The answer was a most emphatic negative. They began to think me dangerous, so I reassured them by saying that I did not wish them to be bitten by any snake. They seemed a little disappointed, for I believe, that there floated in their minds dim visions of a not unremunerated *atman* cum *dignitate*, within the precincts of my compound till such time as convalescence should be established.

I believe their statement most fully, and I should have no serious fears, were I myself bitten by an echis, but I did not allow their proposition to be carried out, as I think as a stronger case is necessary to justify *cinisation* on man.

With these facts before me, I did not consider it worth while to try the influence of strychnine as an antidote to echis poison; for I am satisfied that the echis, as met with down here is not a deadly snake, and I am unable to obtain specimens from the North. Throughout my experiments with this snake, I have failed to make out either the frontal headache or the dilated pupil, on which some writers have laid so much stress.

I come now, gentlemen, to a discussion of the cases published, since my last paper, and in so doing, I adopt

my old plan of classification. The cases fall under two heads, those in which the snake was identified, as a deadly one, and those in which it was not so identified. The latter being again subdivided into those which show signs of dryophthal poisoning, and those which do not. This is, however, not the classification adopted by all writers; for Dr. DUXE in his paper before the Indian Medical Congress, as reported in the *Englishman* of 25th January, said: "It is a habit and a bad one, where the snake has not been killed or properly viewed, to class recoveries under strychnia as the result of the bite of a harmless snake, etc." I would add a rider to that statement and say—It is also a habit, and a worse one, where the snake has not been identified, and where distinct and undoubted signs of thanatophthal poisoning do not exist, to assume that the snake is a poisonous one, and by including such cases in statistics to absolutely vitiate the value of those statistics." Gentlemen, I leave you to judge which mistake is the more dangerous one. Surely this is the last country where one would accept unhesitatingly a man's statement that he has been bitten by a poisonous snake. Every bite a native receives, in which the offender is unseen in a 'snake-bite,' and every snake a native sees, be it the harmless dryophthal or the deadly daboia, is to him a most poisonous snake.

No case should be included in our statistics, unless a reliable observer identifies it carefully, or unless there is good and clear evidence of thanatophthal bite, such as drooping of the lids, inco-ordination with feeling of drunkenness and drowsiness.

I myself saw a large powerful daboia strike fairly at a dog, hold it, shake it, and only let go, when the dog had fled yelping several yards, dragging the snake along the ground. The part bitten was soft and fleshy, the bite was apparently a fair one, both the glands of the snake, when dissected, though emptier than usual, proved to contain poison. From one gland alone I obtained more poison than another daboia emitted through a leaf in a vigorous bite.

Add to all this, that there was well-marked subcutaneous extravasation around the bite, and the case seems perfect. I was on the point of trying strychnine as an antidote, but fortunately a 'laissez aller' plan was adopted, and the animal, though it became rather ill, did not die.

Eight days later the same animal was fairly struck by a vicious daboia, the bite being almost instantaneous in its shortness, and this time the victim died in less than three hours.

Surgeon-Major BROWNING met with a similar case, and knowing the interest I take in these things, he very courteously wrote to me about it. I will read you his own words: "A healthy cobra bit a dog in two places with no result—Another bite from the same cobra on the same animal resulted in death." Dr. BROWNING also sent me the notes of an interesting case, where a grass-cutting girl bitten by a cobra 18 inches long, recovered with the aid of only local treatment.

Add to these cases the results of the experiments on maddened and you will, I think, be with me, gentlemen, when I say, that in collecting evidence of cure for snake-poison, it is not gold that glistens.

And the most important point, that the case reported by Dr. Duxé was looking at the snake, and not at the symptoms of thanatophthal poisoning. In any case, the signs of strychnine appeared.

In the case reported by A. Marshall, F. R. S., there were undoubted symptoms of snake-poisoning. Strychnine was liberally given, 34 gr. being administered in bulk to a child of 10. No improvement was noted, and the child died. One cannot but notice two points in this case; one is that local treatment is not even alluded to, and the other that strychnine convulsions closed the child's life.

I come now to a case, which has been made a good deal of, in the *Indian Medical Gazette*. To say that it is by no means convincing. Let me draw attention to the following points—(1) Dr. Baker speaks of the snake as a full-grown one, 3 feet long. Full grown cobras run from 5 to 6 feet in length: this was therefore a half-grown specimen. (2) The man was a snake charmer. It is not uncommon practice among these men to extract the poison before removing a fang. This man was engaged in removing the fang, and it is significant that the tooth he was busy on had an empty poison sac, while the other fang, which was *hors de combat* from an old injury, had a full sac. It is at least probable that the man had not emptied the dangerous side before he commenced operations. (3) The symptoms came on slowly, and, as the notes shew us, were not removed by the strychnine. In fact after each fresh injection we learn that there was 'no improvement.' At last after a long continuance of this state of things, the tide turned, and the man gradually recovered. The obvious interpretation seems to me to be that the patient received a small dose of cobra poison, and rallied from it by his own natural powers in spite of the strychnine, which is not proved to have benefited him at all.

Dr. C. A. LAPIENIA's case seems to have been bitten by an echis. The patient struggled on for a day and a half and then strychnine was given. Death closed the scene about an hour after the new course of treatment was commenced.

This case gathers in force when considered along with a case (reported by Surgeon-Lieutenant Colonel H. Myers) in which the patient survived for 24 hours before strychnine was given. Within an hour of the first administration of the alkaloid the man was dead. I do not say that the strychnine killed the patient, and I never in mind that both of them were very ill before the alkaloid was given, but the coincidence is worthy of attention.

In the first of Dr. JORGE's two cases the bite seems to have been undoubtedly inflicted by a cobra. The thanatophthal symptoms are typical of the patient, when admitted, was well under the poison but was not so extremely ill. Strychnine was freely given (145 gr. in 4 hr.), but without the least advantage.

The second case is far less convincing. The snake was only seen by an assistant surgeon, whose daughter had just received a snake bite. The patient, however, showed dangerous symptoms, and was given strychnine. The patient recovered, but the case is not so convincing as the first.

the description, however, the snake is as likely to have been a *Hydrophis*, which closely resembles the krait in appearance, as it is to have been a krait. At all events the krait is not a viper, (the recorder is in error here) but is one of the poisonous colubrine snakes, and as such, would not be likely to have inflicted the four-marked bite described here.

As to the blood that came from the girl's mouth, it may have been due to a local injury inflicted by her teeth in the fit described, which fit was probably due to fright. I have been unable to find any *valid* evidence to shew that Indian viper or krait bite is attended by hæmorrhage from the mouth either in man or animals, though I am of course familiar with the submucous and subserous hæmorrhage of the alimentary canal and lungs found under these conditions.

As to the rest of her symptoms, I think that we shall not outrage probabilities by ascribing them to fear.

Now as to Dr. DUKE's cases. I fear I must differ from that writer in my method of classifying them. As I have already discussed the published cases he refers to, I will not again allude to them, but will confine my attention to his own cases.

They are the most instructive group of cases yet recorded, and had not Dr. DUKE been led to place an undue value on the records of other observers, notably on Dr. BANERJI's cases, I have no doubt that his own experience would have led him to reject strychnine for ever.

To begin with, out of seventeen cases, Dr. DUKE had nine deaths under the strychnine treatment. Of the eight recoveries, he admits that it is doubtful whether the snake was poisonous in 3 cases while in case 14 the offender was a grass green snake, which produced no serious symptoms. I only know one snake in the plains answering to this description, and that is the very innocent and very common *Dryophis Mycterizans*. Four cases remain, I have it on Dr. DUKE's own authority that in none of these cases was the snake brought in for identification. Nevertheless case 6 is unhesitatingly pronounced a cobra bite. We are told that the symptoms were severe, convulsions being frequent. This is in itself a strange history, and one that excites suspicion, for neither in men or animals does one find convulsions as a symptom of cobra-bite till the patient is absolutely moribund. Lastly, I may say that in a letter Dr. DUKE wrote me, he candidly owned, that the evidence on which he attributed the cures in these cases to Strychnine, was his faith in the reputation of the antidote. Science, gentlemen, as I need not remind you knows no such law as faith, and judges on the standard of hard facts. Dr. DUKE's cases read to me thus. In eight of them no evidence is forthcoming of thanatophidial bite and these may therefore be excluded. The remaining nine all died whether from the venom or the remedy or both, it would be hard to say.

To my mind Dr. DUKE's cases are the most damning evidence against strychnine yet to hand, and I think it a high tribute to his integrity of purpose, that in spite of the views he held, these cases were ever put on record. I say, 'held' advisedly, for Dr. DUKE has practically owned to me his conversion from the belief, of which he was the *quædam* champion. I desire to take this oppor-

unity of thanking him for the kindness, openness, and freedom from prejudice, with which he has assisted my enquiries.

Before quitting this subject, allow me to allude to two methods of treatment, which have been recently suggested more or less, as the outcome of the use of strychnine.

The first of these is a custom against which I would raise a most emphatic and earnest protest. I refer to the neglect of 'the ligature' in the treatment of snake-bite. Some indeed have not been content with having left undone the good which they ought to have done, but have gone so far as to undo the good which others had done. I mean that one finds, in the records of cases, instances in which observers, relying on the efficacy of strychnine, have been tempted to remove the ligatures that wiser, if less educated, hands had applied.

I am aware that much latitude must always be allowed for individual opinion in the treatment of any particular case, and I would be the first to give that latitude to any one who keeps within ordinary bounds. Vicious to the patient as I believe the administration of strychnine to be, I can understand the position of those who do not agree with me now, and who therefore administer it, but nothing to my mind can defend the practice of depriving a patient of that refuge from his fate which the exclusion of the snake venom from the general circulation affords. The value of the application of the ligature has been proved up to the hilt by experiment; on common physiological grounds its utility is self evident, and as a method of treatment it has been recommended by names that will live to all time in the history of snake poison research, names such as those of FAYER, WALL and RICHARDS, nay more it has received the approbation of every trustworthy medical officer in this country, who by actions, which speak louder than words, has hastened to apply the ligature as soon as he has reached his snake-struck patient.

Gentlemen, I fear that this example may prove infectious and that many of our subordinates with the best intentions may be led into the same error. It is urgently necessary that we should speak out clearly against this evil and nip in the bud what may otherwise prove a source of danger to the lives we are bound to protect and a source of discredit to the practice of medicine in India.

The other method of treatment alluded to was suggested by Dr. LAUDER BRUNTON. That able writer has proposed washing out the stomach with Condy's fluid in snake bite, on the grounds that (the poison is excreted through the mucous membrane of the stomach and that we are by this mode of treatment able to neutralise it and prevent its re-absorption by the mucous membrane.

There are, however, two flaws in this argument. I speak, gentlemen, with the very greatest respect for the man whom the whole world of science esteems and rightly esteems so highly, and whose pupil I had the honor erstwhile to be. Dr. BRUNTON will be one of the first to yield to facts and two facts face us here.

1st.—You will notice that I found it impossible to poison animals with even large doses of viperine or colubrine poison taken by the mouth on meat. I am aware that FAYER killed fowls by the administration of snake poison

through the mouth, but my experiments which some of you have witnessed have led me to conclusions different from those of that great observer. I may say that Dr. Bowman has also independently arrived at the same result by his work on this subject.

Next.—A reference to the cases in which post mortems were performed will show that the excretion of the poison as evidenced by submucous hæmorrhage does not take place so early or so markedly from the stomach as it does from the lower part of the small gut and from the great gut. Submucous hæmorrhage in these latter portions of the alimentary tube were the rule, while bleedings from the stomach or upper part of the small gut were rare. I am inclined to believe that the excretion takes place through the solitary and agminated patches of adenoid tissue in the bowel.

Obviously, gentlemen, it would be useless to wash out the stomach under these conditions, while it would be a needless source of irritation to the patient who needs above all things to have his strength husbanded that he may be able to fight out his battle for life, unhampered.

The sense of my many obligations again comes over me and I feel my powerlessness to rightly express my gratitude to the many, who have so freely and generously given me their help in my work.

In Madras the Surgeon-General, Surgeon-Lieutenant Colonel ALLMON, Surgeon-Captain THOMSON, Mr. JONES and others have doubled the debt I owe them, while as to Surgeon-Captain GIFFARD, I can only say that much of the work I have put before you, has been his almost as much as my own. Equally generous has been the help I have received from many who are not serving in this Presidency. Of these I would mention Surgeon-Lieutenant Colonel CONNINGHAM, Surgeon-Lieutenant-Colonel JOSHUA DUXE, Surgeon-Captains BUCHANAN and BIRD, and Mr. KANTHACK.

Once again, gentlemen, in closing my second paper on this subject, let me say that I have no wish to make controversies by the sword of controversy. Mine it has been to lay facts before you, and then to leave you to judge each one for yourselves, but I would press home on you and on each one, whom this paper may reach, that the subject we are dealing with is no mere child's play. It is a matter of life and death to hundreds, if not to thousands, and it behoves us to think well, nay more to think our best, and having thought, to throw the whole weight of our influence into the scales on one side or the other.

If erysine be the hope of the snake-bitten wretch, fight for it. If it be a spectral delusion, a shadow of death to rob the living of precious life, and such I believe it to be, away with it, and the sooner the better.

A PHARMACY BILL IN NATAL.

The Natal Parliament has before it a Bill providing for the due qualification of medical men and pharmacists, organizing a medical council and a pharmacy board, restricting the sale of poisons to registered persons under certain precautions. Several members objected vigorously to the monopoly which the Bill sought to create, and the Prime Minister admitted there was much force in the arguments of those who opposed the Bill. It was intimated that poisons used by farmers and stock-raisers, especially, should be excluded from the Bill, and, on the understanding that the Bill in certain other respects should be amended, the Bill was read a second time on the 22nd.

DISINFECTANTS; THEIR ACTION AND USE.

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(Concluded from page 33, Vol. VII.)

CHAPTER XV.

POISONOUS, YET GOOD, DISINFECTANTS.

BURNETT'S FLUID; COPPER SALTS; LEAD SALTS;
LEAD SALTS; LLOYD'S FLUID; SETON'S
LIQUOR, TELEGRAPH BATTERIES, AND
ZINC SALTS; THEIR CHARACTERS
AND USES.

COPPER SALTS.

(498). COPPER SALTS, are useful disinfectants even though they may have the disadvantage of being poisonous and rather expensive.

(499). CUPRALUM is a patent disinfectant of uncertain composition; but which appears to be an aluminium compound containing traces of copper.

(500). SETON'S LIQUOR is obtained by mixing together;—copper sulphate, chromic acid, thymol and boric acid, with a little water, allowing them to stand for several hours; then diluting with a larger quantity of water, agitating every two hours (during the day) for about a week, after which the clear greenish-colored liquid is filtered off and diluted to a proper strength. It is a powerful germicidal, deodorant and does not stain linen or spoil furniture; but it is too poisonous to be used in antiseptic surgery.

(501). COPPER SULPHATE known also as *blue stone*, *blue vitriol* or CuSO_4 , instantly removes the smell of sulphuretted hydrogen and possesses powerful germicidal properties and antiputrefactive powers which make it very valuable for drains, sewers and cesspools but it is scarcely suited for household purposes as it is poisonous.

(502). The waste products of Telegraph batteries may be advantageously employed for disinfecting purposes, their action being aided by the copper compounds which they generally contain.

DONOVAN'S SOLUTION.

(503). LIQUOR ARSENICI ET HYDRARGYRI IODIDI is a very valuable disinfectant and antiseptic; but its corrosive and very poisonous properties are against its general use. It is obtained by triturating 45 grains of Iodide of arsenic with 45 grains of red Iodide of mercury in 1½ ounce of distilled water and then filtering.

LEAD SALTS.

(504). LEAD SALTS form fairly good disinfectants but for some reason or another have not come into general use and though most all the salts are valuable still the acetate is the only one that has up to now been available.

(505). LEAD NITRATE (PbO_2 and PbO_3) rapidly decomposes, sulphuretted hydrogen, becoming converted into the insoluble sulphide of lead (PbS), and setting free the nitric acid that converts animal and vegetable matter into the state of its impurity. It has the same antiseptic properties as lead acetate but should be used with caution as it is poisonous.

is merely a solution of nitrate of silver, prepared by gradually adding 7 ounces of nitric acid to a solution of litharge, worked into a cream with water and then further diluting with 2 gallons of water.

ZINC SALTS.

(508). ZINC SALTS form useful disinfectants even though they may have the disadvantage of being poisonous.

(509). BRANETT'S DISINFECTING FLUID, which is also a caustic poison, is merely a zinc-solution in which 84 ounces of Chloride of Zinc are dissolved in a pint of water.

(509). ZINC CHLORIDE ($ZnCl_2$) is usually used in solution, being exposed either in shallow pans or on cloths that have been soaked in it. Its action is chiefly on the air and it decomposes sulphuretted hydrogen and sulphide of ammonium, while its caustic properties are destructive to organic matter, which it quickly permeates and disintegrates as soon as it comes in contact with it. While in itself odorless the powerful deodorant and anti-putrefactive virtues of chloride of zinc are unquestionable and its antiseptic powers are so great that septic wounds are rapidly rendered antiseptic and its 8 per cent. solution is far more energetic in checking (and purifying from) parenchymatous hemorrhage than is a fifteen per cent. solution of carbolic acid.

(570). ZINC SULPHATE or *vitriol* ($ZnSO_4 \cdot 7H_2O$) is abundantly formed in telegraph batteries by the action of dilute sulphuric acid on the plates of zinc immersed in the battery cells, but as the zinc is generally used in couple with copper, sulphate of copper ($CuSO_4$) is also produced. For analytical purposes it may be prepared by letting pure sulphuric acid diluted to five times its volume of distilled water act upon pure zinc, evaporating the solution to concentration and allowing the sulphate to crystallize out as crystals, resembling Epsom salts in appearance.

(511). The commercial sulphate of zinc is usually prepared by roasting zinc blende (ZnS) at a low heat, extracting with water, concentrating the aqueous extract by evaporation and setting aside for a time to obtain crystals of the sulphate, which are often mixed (during their process of formation) with sulphite of zinc, which does not, however, materially interfere with the action of the sulphate in its uses in the arts or as a disinfectant. Both the sulphate and sulphite of zinc are good disinfectants, especially for sewage where they decompose the sulphur compounds and prevent zymotic development.

IRON SALTS.

(512). IRON SALTS. On account of their cheapness they constitute a rather valuable class of disinfectants but it seems that their very cheapness is against their employment by the general public with whom the adage "cheap and nasty" is carried into operation, without taking heed of remembering that to every proverb and rule there are many strong exceptions.

(513). FERROUS SULPHATE. Known also as *Melanterite*, *Copperas*, *Green Vitriol*, *Iron Vitriol*, *Iron protosulphate*, $FeSO_4 \cdot 7H_2O$ is obtained as fine green oblique rhomboidal (soluble) crystals when iron pyrites (FeS_2) or Marcasite (FeS_2) are oxidized or when limonite acted up by sulphuric acid. It is a common mineral compound. Crystals small quantities of sulphate of cuprous oxide of iron ($Fe_2O_3 \cdot 3H_2O$) which is readily decomposed (yielding a basic sulphate).

on being boiled with water. Cuprous is extensively used in the manufacture of ink and its great tendency to absorb Oxygen ($10(FeSO_4) + O_2 = 2(Fe_2O_3 \cdot 8H_2O) + 4(Fe_2O_3 \cdot 3H_2O)$) makes it a valuable reducing agent and a good disinfectant for application to manure heaps and sewage but as its powers are somewhat limited it can scarcely be termed a powerful sanitary agent even though it has the property of decomposing sulphuretted hydrogen. Exposed to air, whether as crystals or in solution, Ferrous sulphate absorbs oxygen giving a yellowish deposit of ferric sub-sulphate which is readily decomposed by boiling with iron.

(514). FERRIC CHLORIDE, *or chloride of iron* when prepared by treating red-hot iron with dry chlorine is condensed as beautiful dark-green crystalline scales (Fe_2Cl_6) which are highly hygroscopic; but when prepared by evaporating the solution resultant on the action of hydrochloric acid on iron wire and subsequent treatment with nitric acid and more hydrochloric acid it is obtained as pale orange-yellow opaque crystalline masses ($Fe_2Cl_6 \cdot 8H_2O$) which are very deliquescent and freely soluble in water. Through ferric chloride is permanent in air, the feeblest reducing agents rapidly convert it into ferrous chloride. [Thus, $Fe_2Cl_6 + H_2O + Zn = 2(FeCl_2 + ZnCl_2) + H_2O$ or $Fe_2Cl_6 + SH_2 + H_2O = 2(FeCl_2) + 2(HCl + H_2O)$. Ferric chloride decomposes sulphuretted hydrogen and ammonium sulphide and, when used as a disinfectant or sewer deodorant, it yields chlorine to unstable organic matters and becomes itself reduced to ferrous chloride ($FeCl_2$).

THE HISTORY OF PARASITISM AND OF PROPHYLACTIC INOCULATIONS IN CHOLERA.

By SURGEON-CAPTAIN PATRICK HEHIR, M.D., F.R.S.E., L.M.S.

Hyderabad, Deccan.

CUNIOUS though it seem that every disease of alleged bacillar origin has at least half a dozen tribes of micro-organisms saddled on to it, still the parasitic history of the etiology of cholera is now about 46 years' old. POWELL (1849) attached etiological importance to the vibrio regalis, which he found in cholera stools, and WHITE supported this view, while HASEL (1878) attempted to confirm it. Describing the bacilli found in cholera excreta, PASTEUR (1854) stated that they destroyed the epithelial lining of the bowels by multiplying in it.

GIBLL (1856) attributed cholera to a *Proteus* found in the dejects, but the distinguished pathologist HALLIAX (1867) connected it with a variety of micrococci, which he stated were the spores of the *micrococcus*, and this theory was universally believed and for many years quoted in every work on medicine and pathology; but it has since been shown that these organisms are only one of the many varieties found in (human) cholera dejects.

BOUCHARDAL (1868) declared cholera to be due to a virus manufactured by "infusoria," giving rise to a form of fermentation in the soil, and he was of opinion that it was the infusoria in the marshy soil of India, and especially along the shores of the Ganges.

I think the most important investigations in connection with the etiological relations of cholera are those made

conjointly by Professors T. K. Lewis and D. D. CURRIE (1872) and published in their brochure entitled "Microscopical and Physiological Researches into the Blood and Excreta in Cholera," which runs over an enormous field of work. DANET (1873) associated cholera with a cryptogamic parasite which he thought was very analogous to the organisms of acute albuminuria; but differing from it in (a) possessing a more abundant mycelium; (b) being much larger, and (c) the frequent absence of the transverse septa of the so-called "sporiferous cells."

MARTIN and SCHWENINGER (1873), declared that they had found the urinary tubercles of cholera patients completely blocked up with bacilli, and HAYEN and RAYNARD found the same thing, but did not attribute the cholera to them; whereas DWAINES considered that three species preponderated, *viz.*, vibrios, bacterium and bacteridium. Statements like these are of no value, because, ordinary dejecta swarm with most varied microorganisms of both the animal and vegetable kingdoms.

Almost every text-book on medicine written in Europe or America tells us that all of Koch's statements have been repeatedly confirmed, but never directly refuted by the many authorities, who have investigated these matters, and we are similarly assured that in every case of genuine Asiatic cholera the comma bacilli are present in the intestines, and that they are never found under other circumstances. This we allow to be so in the vast majority of cases, but giving the fact its maximum value, it is only an interesting clinical and diagnostic point for differentiation in doubtful cases.

True REITSCH and NICOTÉ followed by KOCH himself, succeeded in producing cholera in the guinea-pig by introducing pure comma bacilli into its duodenum. But this does not prove that the comma bacillus is really the specific cause of cholera in the human being, nor that the spirillum is invariably present, nor how it gains access to the human system, or in what manner excites the characteristic processes of the disease.

The rapidly increasing number of organisms of this kind met with in the human being led LEUCKART to clear the large class of organisms now embraced under the term *sporozoa*, a definition we cannot accept, because it excludes a certain number of the very forms for which the generic name *sporozoa* was created on account of their chief characteristic sporulation.

As my prediction of five years ago has been fulfilled that parasitism from protozoa would become an important factor in the pathology of human disease, I feel sure that in the years to come, organisms of the animal kingdom will be found to play a much more important part in the etiology of disease than we can even at present conceive. Sceptics may jeer, and enthusiasts exaggerate, yet the rôle of animal parasitism, in the introduction of poisons into the human system, goes on yearly increasing at a terrific rate and though strongly tempted to reply "None" when asked, the precise connection of parasites with disease, it would be safer to say we are only on the verge of proving the connection of at least five such maladies with such organisms. First amongst these I would place the

whole of the malarial maladies as they make up about half of the aggregate cases coming under consideration in India. In the next group I would put cholera, dysentery, erysipelas, pyæmia, septicæmia, carbuncles, small-pox and hydrophobia.*

In the pus of one variety of furuncle, I have on several occasions met with an actively multiplying protozooid body, I have also met with different sorts of spores in some form of: (1) *simple colitis* giving rise to symptoms exceedingly like ordinary colic, but more chronic and less intense; (2) suppurative *odontitis* giving rise to molecular disintegration of the periodontum and the crusta petrosa of the teeth, finally causing atrophy of the alveoli, and falling out of the teeth; (3) *aphthæ* of children, cachectic subjects, and old people, (4) *vesical catarrh*.

It is now more than 15 years since the parasite of malaria was discovered by LAVERAN, and the curious part about the literature of the subject is, that there are two distinct schools at the present day: one entirely following LAVERAN's theory of malaria and the other the Italian school, believing that the organisms are distinct and different, and that there is no identity in the details of the polymorphic organism discovered by LAVERAN; and those recently described by MARCHIAFAVA and BIGNAMI, except that they all belong to the same class of parasites. I verily believe that the parasites described by LAVERAN in Algiers and by GOLGI, MARCHIAFAVA and DAMLOSKY are precisely the same as those that we see in this country and are undoubtedly met with in the blood of different cases in India.

From my own observations on the hæmatæzoon of cholera, the plasmodium malarie, the bodies met with in amoebic dysentery, I conclude, that in the life cycle of pathogenic amœbi, we arrive at certain general facts, the chief of which are:—

1. That all pass through the stage of development markedly distinct from one another.
2. That these stages are covered in (a) impregnation of cells or tissue, or some structure with spores; (b) the formation of cysts, and (c) the development of the mature parasite.
3. The manner of formation of spores differs in different species, but in all may tend to the stage of sporulation.
4. The formation of cysts is a special feature, and may be termed the cyst stage.
5. The development of the flagellæ, spherical bodies may be formed in the plasmod stage or stage of maturation.

Whilst contained within the cysts the amœba present first a hyaline and then a granular appearance, but their position is limited on the outer surface by a smooth or wavy border, but the inner surface is smooth and uniform. In the amœboid stage the organism may be at once recognised by its granular contents.

The proof as to the etiological significance of the comma bacilli is as yet to come, and though I do not

* In one case of hydrophobia I discovered a minute, ellipsoid animalcule, structure meeting with solution difficulty and entirely different to any and dissimilar.

as a critic, yet the fact of my having devoted a great deal of attention to all that concerns the subject of cholera qualifies me to express an opinion upon the question of HARKNESS, whose researches are valuable if it be proved that the comma bacilli is not the cause of cholera, and we are left in the sorry plight of ten years ago, while if we go on giving blind heed to improved doctrines, we shall be in the same place 10 years hence.

The process of prophylactic inoculation against cholera has had a most chequered career; beginning with FARRAN'S inoculations under very primitive and insufficiently recorded conditions, whilst cholera was raging in Spain. Certain details given through Mr. (now Sir) CHARLES CAMERON M. P., tending to shew that it might be possible to ward off the fatal effects of the disease, a test experiment was made by DR. FARRAN at Alieria, a town of about 16,000 inhabitants near Valencia. Subsequently two special scientists, Messrs. PAUL GIBIER and VAN ERMANGEN, who were appointed by their respective governments to study DR. FARRAN'S method of preventive vaccination for cholera, (independently) arrived at the conclusion that inoculation with his cultivated virus (of the comma bacillus) *did not prevent animals operated on from taking the disease*, when the poison is experimentally introduced.

Professor RAY LANKSTEN maintained that KOCI'S comma bacillus is merely a segment of a spirillum, that has broken up into little pieces, each of which corresponds to a turn of the spire. This is partly true, as certain cultivations appear as long spirilli, but most of them remain throughout as commas.

M. POUCHET'S contentions have been borne out by experiments at Marseilles, shewing that biliary acids are relatively more abundant in the blood of cholera patients than in others. When DR. FARRAN'S experiments were subsequently subjected to careful re-investigation, it was specially shewn that the primary data upon which all his figures and conclusions were based were faulty. And had he really been convinced of the value of his own work, he would not have been discouraged by such opposition which was also on every side offered to LAVRAN'S discovery of the plasmodium malarie but the latter was so convinced of the value of his discovery that after a six years' fight he succeeded in converting almost the whole pathological world to his views.

Next followed Professor GAMALIA'S inoculations, which died a natural death, though, at one time it was actually decided that he should come out to India and practise his system as HARKNESS is doing at the present moment, but for some private reason, he relinquished his intention. And we have not heard whether his prophylactic inoculations were practised during the last fierce epidemic in Budapest, where he had every opportunity of proving his claims. The success of HARKNESS'S method of inoculation appears to have been due partly to the fact of his being a foreigner working in the midst of Englishmen, and partly to the natural desire of doing anything which will give the people a guarantee against attacks of this dire scourge, but chiefly to the belief expressed by a few influential medical officers in KOCI'S comma bacillus, and results obtained from work based on that parasite.

Against the principle of prophylactic inoculation I have nothing to say; as I believe it to be a system which, alone or in combination with anti-toxines, will perfectly revolutionize the sciences of preventive medicine and of therapeutics as proven in diseases, such as anthrax, hydrophobia, pleuro-pneumonia, &c. It is a field of research practically illimitable in its sphere of usefulness, and what has been proved in the case of some specific diseases will be proved of others. Always and provided that at the outset of such experimental work we are dealing with the true cause of the disease, the real *contagium vivum*—if such there be,—and not with an agent which has been forced into a false position by those who have had but scanty opportunities of testing the accuracy of the doctrines they promulgate. It is easy for adverse critics to pick holes in the bacteriological work of the present day, because it is an undeveloped science—in process of evolution, and the maturity of which may probably not be attained for some generations to come. The same may also be said of the theories of ptomaines, leucomaines, immunity, &c. But few of those who oppose, bacteriologists are eligible to express an opinion upon what they know but little about.

I believe that the time is not distant when prophylactic inoculations will be practised on a wider scale, with more successful results in a number of specific diseases, than they at present are. It is highly probable that we shall, by and by, have a commission to decide on the merits of HARKNESS'S inoculations as a prophylactic measure against cholera, when those who are interested in its being considered a success or a failure, will be asked to give an opinion upon the subject. We should be disposed to ask perfectly independent and trained scientific bacteriologists to do this, and especially men who, whilst they have had some experience with cholera, and are perfectly familiar with all the conditions necessary to conduct, are not prejudiced by exposing either side to such an investigation.

When Professor DUMAS (1869) requested PASTEUR to investigate the silk industry in Southern France, the modest savant complained that he knew nothing about sericulture. "So much the better, said the great physicist, you go with an untrammelled mind." Within three days after beginning this work, PASTEUR had solved the whole problem of the prophylaxis of flacherie.

It may be remembered that KOCI'S main contention is that the comma bacillus is invariably met with in the dejecta or alimentary canal of cholera cases, and from this fact a diagnosis in any doubtful case may be settled by finding the organism in the stools and vomit. But negative results from simple microscopical examination do not exclude cholera; while KOCI himself allows that this examination is only successful in 50 per cent. of cases. In the other 50 it can with possible certainty be settled only by cultivation experiments followed by microscopic examination.

In the same way we are able to separate various kinds of toxopeptones from putrid meat, the separation being effected by alcohol which precipitates them, whilst they may be afterwards extracted by means of pure (distilled) sterilised water.

KIMURA was the first to show that the serum of animals recovering from an infective disease has the

peculiar property of giving immunity against the infection of that disease, when inoculated into other animals of the same class. He states that he has proved satisfactorily that the blood serum of patients recovered from cholera renders to guinea-pigs immune to the infection of the comma bacillus. But this conclusion was scarcely consistent with his previous statement that the serum of many human beings, who never had cholera, when inoculated into guinea-pigs, renders the latter immune from infection with the comma bacillus. It is only recently, however, that it was proved that the serum of 20 per cent. of all cases gives immunity against the infectivity of the comma bacillus, although the minimising power of the serum does not necessarily exempt the donors (of the serum) from this infectivity. Further, it is shown that the serum of those suffering from cholera gives similar immunity in 20 per cent. of cases—a fact which confirms the statement that the immunity given by the serum is no test of the extent to which the donor of the serum is himself rendered immune from cholera. After death from cholera the serum in 50 per cent. of cases possesses protective properties, whilst the serum of recovered patients only 58 per cent. gave immunity to guinea-pigs. We therefore see that the difference between 50 and 58 per cent. of protection given by the serum of the non-cholera, and the recovered persons is so small, when allowance is made for experimental errors, that it may be neglected, and the conclusion is forced upon us that there is no immunity gained in the guinea-pigs by the inoculation into them of serum from those who have had an attack of cholera.

It is also proved that guinea-pigs die when the comma bacillus are injected into the peritoneal cavity. The injuries produced by injection do not depend on any form of intoxication from intra-cellular or protoplasmic form of the comma bacillus, but are a true infection. This is shown by the fact that post-mortem comma bacilli are found in enormous numbers in the peritoneal cavity and in the blood, whilst the bowels are but little, if at all, affected. An agar-agar preparation injected in the same way causes only slight fever, and cultivations exert very little effect, although the strength is regained if treated with fresh agar-agar. When living eggs of the domestic fowl are inoculated with virulent comma bacilli (known as HAREFFA's method) the albumen becomes extremely virulent, four c.c.m. of it being sufficient to kill a guinea-pig in about a quarter of an hour. Attempts to isolate the toxin from the albumen failed, but a toxo-globin and a toxo-peptone were found, the latter having far greater virulence than the former. Aerobic cultivation of the comma bacillus in pure peptone solutions led to the production of two peptones, one of which resisted the influence of boiling, but was less poisonous than the other which killed guinea-pigs in 7 minutes, and was utterly destroyed by exposure to a boiling temperature. If aerobic egg-cultures are made, a peptone is formed, which does not kill, though it caused indigestion in guinea-pigs, and was not readily destroyed by heat. From these data it is presumed that an aerobic growth favors the formation of cholera-toxin of the comma bacillus. Egg is the best medium for

their culture, but the medium for the growth of the comma bacillus, and not from albumen, as is usually supposed. This experiment is of great importance, and has very important bearings on HAREFFA's statement when he made his statement to the effect that it is difficult to get a strong poison (virus forte) and that this can only be done by its passage through guinea-pigs.

Again, there is considerable interest attaching to the fact that we cannot transmit the cholera infection directly from animal to animal uninterruptedly; that is, by injecting the peritoneum of one guinea-pig into another, at once or later the process of infection ends, and the animal infected does not show any signs of being unwell, or scarcely evanescent indications of indisposition, although the infecting agency may be teeming with the comma bacillus. If agar cultures are prepared from this innocent substance, the full virulence is regained. This shows that the interrupted passages of the comma bacillus through the body of animals reduces the virulence of the comma bacillus to zero, this micro-organism becoming then prophylactic instead of pathogenic or parasitic. When they have lived in this saprophytic state for a brief period, however, they once more become pathogenic.

Rabbits and dogs, it is said, have been immunised against cholera injection by various ways, (especially by means of injections of sterilised or albuminoid virus or immunised *per os*, and proved that the serum of such animals has great protective powers. To apply such experiments to the introduction of prophylactic measures, attempts have been made by means of intravenous injections, and it was found that their serum proved bactericidal to the comma bacilli *in toto*, and also apparently decomposed the cholera serum outside the body in the test tube. The immunitive and curative powers of such serum were said to be very great, and it is argued therefore that such serum might with hope of success be employed on persons already suffering from cholera. It is believed by some that the serum contains an antitoxine which acts as a preventive principle, and it has been separated in the dry form, and found to be as protective as regards immunising power as the serum itself. But if we view these points in connection with the experiments of MATSONIKOFF, already quoted, we find that they lose ground. The whole of these considerations point to the fact that we have advanced very little as regards our knowledge of the actual etiology of cholera. How then is it possible to be so full of expectation from the anti-choleraic inoculation of HAREFFA?

The only direct proof that these circumstances give us is that the comma bacillus, under certain conditions, is capable of producing cholera in the guinea-pig; (2) that the serum of human blood immunises them; (3) that the virus, after having passed through the guinea-pig, loses the greater part of its intensity, and that if guinea-pigs are inoculated with the reduced virus, they are protected for a certain length of time from the action of the comma bacillus.

At their best such experimental inoculations as those practised by HAREFFA are very of temporary value. It would be interesting to know if it is only an experiment, and not a fact, that much beyond negative evidence, and even beyond this kind of evidence, these inoculations, should be carried

in districts where cholera is at present in the endemic form.

It is a strange circumstance that the unfortunate people of India and our soldiers should be made the victims upon whom to perform an experimental procedure of this kind, and that simply to gratify the curiosity of a few scientists, who believe devoutly in a process unsupported by such problematical hypothetic and equivocal evidence as that under consideration.

But if it were possible to concede a single advance to these inoculations, we should still have to face the difficulty connected with the question of the length of time over which the protection lasts—only for a year, and then destruction. We must be inoculated yearly. It is not likely to last for many years, because of the little disturbance it produces. I do not express this last statement as a general doctrine, although there may possibly be an element in it for which we may at some future date be able to generalise.

A MIRROR OF PRACTICE.

HYSTERICAL DYSPHAGIA.

BY ASSISTANT SURGEON A. BEALE I.M.S.

Medical Officer in charge R.I.M.S. "Clive"
Southampton.

At Southampton on the 29th of June 1895, a lascar reported to me that he could not partake of his meals, or even drink anything for the past 24 hours. On examining the inside of his mouth and throat the parts were found relaxed, and very slightly injected. The index finger of right hand was introduced as low down the throat as possible but no obstruction could be made out. On external palpation of the neck, which felt soft but looked rigid and its superficial veins distended, he winced saying that it was painful; nausea and vomiting were also observed. I could not understand what prevented his swallowing, as everything appeared natural enough. His eyes were injected, starting out of his head and full of tears. I fancied he was malingering, and, to be on the safe side, offered him a draught, containing 3ss each of Pot. Bromide and Spts. Ammon. Aromatic, which I got him to swallow in very small quantities at a time, but with great difficulty. The next morning his temperature was 99, and dysphagia no better—would partake of neither food nor drink—viscid saliva accumulating in throat, in great quantities, injected eyes, lachrymation, pain in throat with venous distension, peculiarly offensive breath, brown tongue, starvation, constipation, prostration, extreme nervousness, with an accentuation of distress on attempting to swallow anything, were the signs present. Towards evening the more urgent symptoms abated and the constriction relaxed. The following day he was apparently cured, for he could take liquid nourishment, and all his nervous symptoms had completely passed away except the pain in throat (on slight pressure) which however soon left him.

Treatment consisted in—Frequent Candy's mouth wash. Pot. Brom. gr. 35, three times; Rhusky 4-oz. thrice; nourishment in such quantities as he could be made to take; and Magnesia Sulphate.

Now this disease I was inclined to associate with a variety of similar affections, for instance diphtheria, hysteria, hydrophobia, obstruction of œsophagus, &c. whose enumeration of each of which I give by way of comparison. It resembled the first named disease by there being rather high fever; head, heavy painful and heated; brain, dull of quick perception; frequent nausea and even vomiting; mucous membrane of throat, red and very painful, rendering deglutition difficult—the peculiarly offensive breath was not to be overlooked as being suspicious—brown tongue, constipation and prostration, being the principal remaining points of resemblance. Of course the disease being brought early to my notice I did not expect to so soon see developed the characteristic white patches of diphtheria, but still I expected they were to come. When laid side by side with hysteria there were many symptoms which pointed the case out as being very much of this nature, as for instance the nervous phases, lachrymation, imaginary pains in throat, the loss of power of swallowing which in reality meant the condition known as globus hystericus, and the headache. Compared with hydrophobia we had the following points of resemblance—headache and fever, spasms of muscles of throat, which felt hot and choking and exhibited a condition of dysphagia, the nervous distress and tremulousness excited on offering him drinks—the copious secretion of viscid saliva, and prostration.

His condition I again thought very much like what would be present in obstruction of the œsophagus, lower down than the parts into which I could see or feel, and brought on possibly by the formation of an abscess, impaction of some extraneous substance, or by pressure from adjacent parts within—Before closing I will introduce the principal factors which induce the state known as dysphagia or difficulty in swallowing, which may arise through many causes, as disease of tongue, fauces and œsophagus, it is a symptomatic as well as sympathetic affection—Seldom exists of itself. It may be seen in cases of paralysis, contraction of the œsophagus by cancer, abscess, stricture, ossification, aneurism, bronchocele and foreign bodies. The sympathetic variety is seen in hysteria, tetanus, trismus, and hypochondriasis.

In the idiopathic variety are seen elongation of the uvula, with relaxation of the œsophagus and pharynx. Of course the previous history, when comparing the signs of similitude which existed between the case under treatment, and the diseases which it resembled, enabled me to fix the affection as being purely hysterical in nature.

TWO CASES OF PUNCTURED WOUND OF THE CHEST WITH INJURY TO THE LUNG: RECOVERY.

BY ASSISTANT SURGEON M. G. DESAI, L.M.S.

Malespore.

C. J., a Hindu male, aged 33, was admitted into the Brooch-Civil Hospital at 4.45 A.M. on the 21st February 1898.

History.—The patient states that at about 3 A.M. some one entered his house and extinguished the lamp. Hearing a noise like the opening of a lock, he got up and tried

to light the lamp, but while striking a match, for this purpose, he was wounded in the chest by some one thrusting a sharp pointed instrument into him. He rushed down stairs, cried out for help, and lay down on his verandah.

Present condition—Has an incised penetrating wound, $2\frac{1}{2}$ inches long and $\frac{1}{2}$ inch broad, on the upper part of right infra-axillary region, but rather curved with its concavity looking outwards and upwards. The chest has been penetrated into the 4th intercostal space on a level with the nipple, and, the lung and pleura being injured, blood and air-bubbles escaped from the wound when patient coughed. The wound extends from above downwards and without, towards, its lower margin corresponding to a line on a level with the right nipple and lower part of the anterior fold of the axilla, while the upper margin is situated in the middle of the axilla—midway between the anterior and the posterior fold. Pulse very weak. After plugging with lint and boracic wool and staunching the bleeding, the wound was dusted over with iodoform, a drainage tube introduced through the wound into the pleura, the external wound was sutured, iodoform dusted over the part and the affected side of the chest strapped with adhesive plaster.

R. Extract ergot liquid mxxx
Aqua ℞ix

One-third part every 8 hours.

2-30 P.M. Temperature 100° . Pulse 92 and weak, complaints of pain in the chest, no bleeding.

The sutures were removed on the 23rd instant, when healing began to take place and on the 10th March the patient was discharged with only a small skin wound remaining. There was very little trouble during convalescence.

CASE II.—DUALA a Mahomedan boy aged 9 years was gored by a buffalo, just below the lower angle of the left scapula, at about midday on the 19th of October, 1894. When brought to the Malegaon Dispensary at 2-30 P.M., the wound was $1\frac{1}{2}$ inch long, but there was no bleeding. During each respiratory act a quantity of air was sucked-in and expelled from the wound, and the skin, to the extent of about 2 inches, acting as a flap right round the wound. The skin wound was on the 8th intercostal space while the deep wound, opening into the lung, appeared to be in the 7th intercostal space. Body warm, pulse 100, Respiration 28.

The wound was dressed with corrosive sublimate solution, a drainage tube inserted, Iodoform was then dusted on the part and the chest bandaged.

Ten minims of Liquor Morphie Hydrochloratis were given.

The boy had no bad symptoms. The temperature generally kept to 100° and the respirations gradually fell to 24 till the 2nd November when the temperature rose to 102° in the evening, the pulse to 104 and the respirations to 44. On examining the chest nothing abnormal was found.

On the 2nd day after admission the bandage was replaced by strapping adhesive plaster to the affected side. The boy was given quinine mixture since admission till the evening of the 27th when, on account of the high temperature, diaphoretic were given. From the third

the child had no fever, the respirations fell to 20 and the general health seemed to improve. The drainage tube was removed on the 6th. The child made a good recovery without any untoward symptom and was discharged, cured, on the 23rd November 1894.

A CASE OF MELANA.

By BANKIM BIHARI CHATTERJI, L.C.M.S.

Bali.

At 11 P.M., on the 8th of July last, I was called in to see a boatman, belonging to the salt Police Establishment, Bali, who was practically healthy, save that he had a slight enlargement of the spleen. He was a well-built man but a habitual ganja smoker, and before I was called in, had passed about some thirty stools of a dark color and somewhat bloody. I found him lying semi-comatose with sunken-eyes, cold extremities, sub-normal temperature, at intervals, cramps of the muscles, pulse thready at the wrist, great thirst and vomiting, but no hæmorrhoids nor tenderness over the abdomen.

I prescribed the following:—

R. Bismuth subnitrate gr. x
Acid gallic gr. v

M. Ft. Pulv. one every 2 hours.

R. Tinct. digitalis 3ss.
Acid sulph. dil ʒss.
Hazelgæ ʒi ss.
Spt. chloroform ʒi ss.
Aque anethi ad ʒvi

M. Ft. Mist. 6 marks one every 3 hours.

Ice to suck *ad libitum* and Empt. sinapis over the epigastrium.

9th July, 6 a.m.—Temperature still subnormal. Pulse 116 and full, comatose, thirsty, but the stools were fewer and less bloody; no urine.

The same mixture and powder continued. Port wine ʒii for a dose to be mixed with arrowroot and ice and taken every four hours.

In the evening he was better, pulse full, 100, conscious, passed urine, vomiting still, body and extremities hot.

R. Bismuth subnit. gr. x
P. creta aromat. gr. x
M. Ft. Pulv i.

Sig: To be taken every 2 hours.

R. Spt. am. aromat. ʒi
Spt. chloroform ʒi
Tinct. digitalis mxxii
Tinct. opii mxx
Acid sulph. dil ʒi ss.
Aque anethi ʒvi

M. Ft. Mist. 6 marks, one every 3 hours.

10th July—Quite conscious, temperature 97° F, pulse 96, no stool, complaining of weakness.

Remarks.—I submit this case not on account of its rarity but to call attention to:—

1. Rallying from extreme collapse.
2. In this season of the year, the people of this locality suffer from gastro-intestinal disturbances producing diarrhoea, dysentery, cholera and melana, all caused by the muddy river water, used for drinking. Sometimes the cases prove fatal. The best plan of treating these cases, in the mild form, is to give a dose of castor-oil to clear off the offending materials, while astringents are harmful.

*Sulphuric acid and Spt. Am. Aromat are not incompatible; either the ammonia or the acid should be first dissolved in water.

DIET CURE IN OBESITY.

By V. S. BALASUNDRA MUDALIAR, C.M.S.

In January 1886, when a gentleman twitted me about growing "stout," I was 25 years of age, 5 feet 5 inches in height and weighed 154½ lbs. which was therefore an increase of 7 per cent. on what I should have been by DR. TANNER's theory which gives a mean weight of only 142 lbs. to my height. Having no hereditary tendency to corpulency, I became naturally curious and consulted books treating on obesity, diet cure, and fruit diet as devised by Drs. T. L. NICHOLS, L. ENSMORE, GRAHAM, TRAIL and Mr. BANTING, &c.

My usual diet was a mixed one, rice forming the staple article, but I now avoided taking fatty (ghee and oil) carnesous, saccharine and starchy foods and adopted light meals, twice a day, of vegetables and fruit and drank a little water when thirsty. I took exercise and a hot bath daily and slept only 7 or 8 hours at night. By this plan I reduced myself to 109 lbs., being changed from my former ungainly condition to a thin person. I however enjoyed health, vigour and activity till my friends interfered and persuaded me to return to my usual diet when alas my obesity returned.

The following table will shew the reduction in my bodily weight at different periods and its increase after I resumed my usual diet.

| Date. | Weight | Date. | Weight |
|------------------|--------|------------------|--------|
| 14-1-86 ... 154½ | | 10-8-87 ... 117 | |
| 15-2-86 ... 149 | | 22-8-87 ... 116 | |
| 27-2-87 ... 146 | | 23-9-87 ... 112½ | |
| 23-4-87 ... 139 | | 26-10-87 ... 109 | |
| 19-5-87 ... 133 | | 7-8-88 ... 137½ | |
| 24-5-87 ... 136 | | 18-7-89 ... 157 | |
| 30-5-87 ... 133 | | 11-3-93 ... 123 | |
| 17-6-87 ... 131 | | 3-6-93 ... 171 | |
| 4-7-87 ... 125 | | 17-9-94 ... 164 | |
| 13-7-87 ... 120½ | | 1-8-95 ... 154½ | |
| 4-8-87 ... 119 | | | |

This experiment may be interesting to your Hindu readers.

SCORPION STING: TOBACCO TREATMENT: RECOVERY.

By J. N. S. COOPPOO SAWMY, M.H.A.

Fort, Trichinopoly.

A FEMALE relation, aged 17, was stung by a scorpion on the left great toe at 8 p.m. on 6th January. At 8-30 p.m. I found her in the following condition: Prostrated, frothing at the mouth, eyes half closed, hard breathing, was conscious, creeping pain all over side of the body and the left lower extremity, pulse weak, cold sweat over the left foot and leg—on the whole she was restless and very low.

Treatment. I had no medicine whatever with me as I was on leave, nor I could procure any from the Civil Hospital at that time of the night, so I gave her some brandy and water, and searched carefully for the sting which could not be found, I also rubbed garlic, into the spot, but it gave no relief to the poor woman. The father of the patient then sent for one of his neighbours, an old man, said to be a curer of scorpion stings. He brought some leaves belonging to the "Atropaceae" and making them into a small bundle in a cloth, which he soaked in water for a few minutes and then squeezed it into the nostrils of the patient, who was made to sniff up the juice, about 30 minims, being placed in each nostril. After a few minutes the symptoms, above mentioned, gradually disappeared, but there was nausea and vomiting, which continued till 12 p.m., and the patient recovered some two hours afterwards.

THE Indian Medical Record.

16th September, 1895.

SOME GENERAL OBSERVATIONS ON THE REPORT OF THE ROYAL COMMISSION ON OPIUM.

WE have in previous articles at some length reviewed the medical memorandum by Sir WILLIAM, ROBERTS who was medical expert with the Royal Commission on Opium. We now turn to the Report of the Commissioners, and as we proceed, it will become apparent that the same bias, the same kind of questionable and unreliable evidence, the same perverted obliquity are found here which we saw characterised the Medical Memorandum.

The nature and conclusions of any report which would emanate from a body of Commissioners whose opinions were necessarily founded on evidence almost entirely supplied by official and interested witnesses was a foregone conclusion. If the Commission had been asked to frame their opinions on the opium habit in India from the bulk and not from the quality of official evidence, or even from the unanimity of official witnesses who constituted the vast majority of witnesses examined, then their way was clear. The conclusions could have been written by the India Office in London, and thus saved the expense of a Royal Commission. There could be only one verdict on the examination of such witnesses, and that would be in complete agreement with the views and policy of the Government of India. But a Royal Commission should be, above all things, impartial, discriminating, and loyal to the kind of evidence placed before it. It could not be expected to be so, if only the official side of the question was presented by witnesses whose future official promotion and social status might depend upon the kind of evidence they tendered to the Commission. It has been well said, that in this enquiry the Government of India was on its defence: or as LORD BRASSEY candidly admitted to the Secretary of the Anti-Opium Society in Calcutta: "We all appreciate that in the encounter in which you are engaged with the Government of India upon its own ground, you are placed in circumstances of no ordinary difficulty." That the Commissioners have not, in considering the official evidence laid before them, made sufficient allowance, for that fact is abundantly evident throughout the report. Instead of discounting the official evidence, they actually emphasise it as the most important evidence laid before them, entirely ignoring or discrediting the disinterested evidence of an influential portion of the non-official national community, and the conscientious and discriminating testimony of missionaries—medical and clerical—whose knowledge of the people and their habits is not equalled by any branch of the public service. The following extract from the report indicates how the Commissions were influenced by the official witnesses. In Section II, para. 58 of the Report we find the following—"No part of the evidence deserves more attention than that of the medical witnesses. A large and important section of these were members of the Indian Medical Service, and we naturally attach great weight to their testimony." This was anticipated by

the Government, and consequently medical witnesses, who had never given any attention to the subject, were summoned from remotestations at great expense, to give evidence at Calcutta. In some instances medical officers whose stations were close to the centres where the Commission sat to hear evidence were summoned to Calcutta as if the Government were deliberately determined to increase the expense of the Commission at the expense of the Indian taxpayer, in order to make the Commission unpopular with the people of India. In short the powerful machinery of a great empire was set agoing to defend and bolster up a traffic which was looked upon in official circles as the very life-blood of the Government of India. It was early foreseen by those interested in the subject in India, that the composition of the Commission itself composed and officered largely by officials boded ill for an impartial, independent and open enquiry. The English Members of Parliament, although in the main honest and upright men, with a sincere desire to act impartially, were yet inexperienced as regards Indian questions and consequently were no match for the official and ex-official element on the Commission. The whole drift of the Report shows that it was carefully and skilfully framed by able officials who knew just how far the non-official members could see, and how far it was possible to lead them without rousing their suspicions that they were being misled. The members of the Commission, however, cannot be said to be unanimous in the adoption of their Report. There is at least one able dissident, in the person of Mr. HENRY J. WILSON, M.P., whose "minute of dissent"—a clear forcible statement printed together with the Report—will, in all future time, shew the very questionable methods by which the Government filtered the evidence before it reached the Commission, and which must detract from its value as a reputed spontaneous expression of Indian opinion regarding opium. The dissent published by Mr. Wilson contains an exposé of erroneous and misleading statements made—not wantonly, we are prepared to concede—by officials. Such statements should invalidate every part of the evidence tendered by those witnesses; but as far as we are able to judge, they do not appear to have detracted one jot from its value in the estimation of the Commissioners.

Of the 722 witnesses examined by the Commission 181 were anti-opiumists, 487 pro-opiumists, and 44 were neutral. The anti-opiumists were made up of qualified non-official medical practitioners, medical and other Christian missionaries, and the majority of the native journalists, lawyers, teachers and professors. The pro-opiumists represented the great majority of the official classes, European and native, including military medical officers, together with many titled personages, as land-owners, and persons having financial interests at stake. This analysis will justly raise a suspicion, at least, of the direction which it was desired the evidence should take.

"Persuasion" or coercion used to induce ryots to cultivate opium.—Mr. Wilson begins his examination of the evidence set before the Commission at the opium cultivation question and he finds that in order to induce the ryots to cultivate opium, persuasion is used, which would mean in English "compulsion." This "compulsion" was greater in the beginning of the century, and the process by

which the ryots were induced to cultivate opium was called by the ryots "coolie driving," which he interpreted as "collecting" the cultivators. Mr. Wilson does not recollect this kind of "coolie driving" with the same anxiety of the ryots to obtain the great privilege of cultivating opium.

Proof that the cultivators were underpaid.—But for most conclusive evidence on this subject is furnished by what has happened since the Commission left India. The Indian Revenue Department's Resolution No. 2204, 20th April 1894, comments on the decrease of the area of cultivation, giving among other reasons the competition of other crops, and states that the price of opium paid to cultivators will have to be increased in order to keep pace with the rise of prices of other produce. In accordance with this the price paid to the cultivators has been raised 90 per cent., viz., from Rs. 5 to Rs. 9 per seer. This proceeding in the present straitened condition of Indian finance, is in curious and suggestive contrast with the official evidence presented to the Commission as to the profitable and therefore popular character of the poppy cultivation.

"Pressure" brought to bear on cultivators.—It was proved and admitted by Mr. FORBES, Commissioner of Patna, that a native zilladar, a Mr. CHRISTIAN, Sub-Deputy Agent, and Mr. SKRINE, the Collector of Bhagalpore, were guilty of bringing "pressure" to bear on the ryots in order to induce them to cultivate opium; and we have not heard that any of those officials have even been censured for such apparently every-day conduct.

Exactions practised on the opium cultivators.—Exactions of every kind are practised by the zilladars and subordinate officials on the ryots; and it was inferred that even European officials were not above suspicion. Crops were ruthlessly destroyed by opium officials when they suspected that opium was not sufficiently grown by the ryots; and in cases of real or supposed infringement of opium law, "departmental punishment" was inflicted on offenders, instead of sending them up to the criminal courts. This kind of "punishment" is apparently approved of by the Government of Bengal.

The compensation babbie burst.—The hue and cry raised about the question of compensation to cultivators, should they be forcibly forbidden to cultivate opium, is quite a new idea—an after-thought on the part of the Government. The suppression of opium cultivation by the Government in many districts and provinces all over India, in previous years never gave them a moment's anxiety. Nor do we find any hint even that the ryots ever thought of compensation or the Government expressed any compunction for refusing to grant licences to cultivate opium. The reason is obvious, the ryots were glad to get rid of it, and the Government knew full well, that crops more remunerative to himself and less troublesome to cultivate, could be selected by the ryots when left free to follow his own choice. But now, when the whole country is seething with discontent, and compensation must be provided for the loss of a very valuable crop, it is not surprising that the Government should have thought of such a thing.

Opium smoking in India.—MR. WILSON has shown that authorities at home are blinded and deceived by the action of the Government of India in these important matters. Two different ministries and two separate Parliaments are shown to have been making the impression that poppy cultivation in India was being considerably reduced: while as a matter of fact, it was very much on the increase.

The China opium trade is the crux of the whole question, and to the views expressed by leading statesmen in China, both Chinese and Europeans, we would now direct attention.

The opinions of Chinese and European Statesmen in China.—As far back as 1816, the traffic in opium between India and China was most emphatically denounced by statesmen whose only interest in opposing the traffic was the protection of an industrious nation from the pernicious influences of the drug. SIR GEORGE STAMFORD STAUNTON, who was in China from 1792 to 1816, said: "The best lands in India might have been made to produce that which was beneficial to man instead of being devoted to the cultivation of such a pernicious article." SIR STAMFORD RUFFLES, who died in 1826, said: "The use of opium, it must be confessed and lamented, has struck deep into the habits, and extended its malignant influence to the morals of the people, (of China) and is likely to perpetuate its power in degrading their character and enervating their energies as long as the European Government over-looking every consideration of policy and humanity shall allow a paltry addition to their finances to outweigh all regard to the ultimate happiness and prosperity of the country." The Colonial Treasurer at Hong-Kong reporting on Chinese trade in 1847, wrote of opium that it was "devastating China, corrupting its Government, and bringing the fabric of that extraordinary empire to a state of more rapid dissolution."

Confucians, Buddhists and Taoists denounce the drug.—The late British Consul in China wrote in 1892 that "opium is equally denounced by the Government, by the Confucian literature, and by the Buddhist and Taoist priesthood."

Chinese Foreign Office and English Statesmen condemn England's Policy.—The Chinese Foreign Office wrote in 1899: "That opium is like a deadly poison that is most pernicious to mankind. The officials and people of this empire all say that England's trade in opium because she desires to work China's ruin, for (say they) if the friendly feelings of England are genuine,—since it is open to her to trade in produce and everything else—would she still insist on spreading the poison of this hurtful thing throughout its empire?" SIR RUTHERFORD ALCOCK, Her Majesty's minister at Peking, with reference to the last quotation, said that "he had no doubt that the abhorrence expressed by the Government and people of China was genuine and deep-seated."

The Royal Commissioners found opium beneficial and legitimate in India. In India on the contrary an enlightened Royal Commission writes of the same drug: "Opium is an absolutely need for non-medical and quasi-medical purposes, to some extent a habit and for the most part a source of serious consequences." That which is a devastat-

ing moral and physical plague in China and the Chinese Settlements is a "benefit" in India? If it cannot be proved that the effects of opium-smoking on the Chinese are widely and essentially different from the effects produced on the natives of India, it is difficult to reconcile the two sets of opinions as referring to the same habit and the same drug.

It becomes a boom in India because Government Revenue is involved.—The only explanation seems to be that in India the officials find it a boom and a blessing because Government revenue is involved, while in China, European Christian, and Chinese officials condemn it because they see and know it to be a degrading habit and a morally devastating curse. There is of course a difference between the smoking of opium and the eating of it, but making due allowance for this, it is notorious that the evils of the habit have been most unblushingly minimised by the official witnesses; while smoking which is universally condemned, is now even fostered, for opium smoking, though universally condemned, is propagated by the lax rules in force in India. There is scarcely one witness of the whole 722 who gave evidence before the Commission who did not decidedly condemn opium-smoking: and with this abundant proof of its deleterious and demoralising effects—amounting to a national curse in China—before us, it is impossible to defend or justify our policy, as a Christian Government, of flooding China and India with this insidious poison.

The traffic unworthy of a great dependency of the British Empire.—In the words of Mr. WILSON "it is altogether unworthy for a great dependency of the British Empire to be thus engaged in a traffic which produces such widespread misery and disaster—a traffic which is contrary to the principles of humanity, cannot be justified on the ground that, if we do not engage in it, it will fall into the hands of others who have no such scruples?"

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SPECIALISM IN MEDICINE.

THERE is certainly more than one side to every question; so while specialism in our profession is cited down by some, it receives staunch support from others. We do not see how specialism, not only in our own, but in any profession, can with any reason be decried. Those who oppose the increase of medical and surgical specialists have yet to discriminate between the would-be and self-constituted repository of special knowledge, and the true devotee to a particular branch of the "healing art" to denounce specialism in medicine in consequence of the tendency of some to rush into its domains from commercial considerations, is as absurd as to denounce orthodox medicine in consequence of existing quacks and quackeries. Some practitioners appear to imagine that a fitting for any particular branch of the profession is sufficient to warrant their ambition to be recognised as specialists in those branches. *The Lancet* and Dr. W. H. SHARRON in the *New York Medical Journal* make some very excellent remarks in considering this subject of specialism in medicine. Says the former, that special knowledge requires special training and special experience, and that a good general medical education is a necessity for one who is to be put and blowed into a special branch of

the profession. Our contemporary remarks that the difficulties in getting on in practice may tempt some to indulge in sharp practices in medicine, but that the idea that all specialism pays is fast disappearing. We expect the same is being played out: and that the numerical growth of so-called specialists makes the public very cautious in the selection of their consultants for special disorders, so that the inferior ones are soon starved out or driven into the ranks of the general practitioners. To enter the roll of specialists without the necessary special training and qualification, but with an imagined aptitude and as a mercenary venture, is one of the most disastrous mistakes that a practitioner can make. One operation unnecessarily undertaken or advised in any one of the very important branches that come under the head of medical specialities is readily brought home to the professional offender, is difficult to be remedied, and is scarcely ever pardoned. Discrimination and varieties in treatment of general diseases is expected, as doctors are known proverbially to differ; but a specialist's failures are more prominently paraded before the public gaze, and are seriously damaging to his own professional career. Even should such a future specialist forsake his special branch and endeavour to establish himself as a general practitioner, he would be looked upon with a certain amount of suspicion as being more of a professional trader than a lover of his calling. We are simply uttering a warning against the temptation of being led into that dangerous assertiveness of proclaiming oneself a consultant in special branches of our profession, without that wide training and experience which the public expects.

Specialism is, however, not only desirable but absolutely necessary, for as Dr. SIMPSON remarks: "Perfection is more readily gained by pursuing one definite line of action;" and instancing the division of the law into civil and criminal practice, and the sub-division of the latter into numerous branches; the division of engineering into civil, mining, and mechanical; the division in mercantile pursuits and in manufactures; the adherence of the artist and the sculptor to special fancies; the special applications in the educational department, &c. Dr. SIMPSON points out that there is a principle of specialism underlying every science and art, a natural division for the cultivation of peculiar fitnesses or bents of mind, and that whatever calling we may pursue in which a certain degree of perfection is to be reached, a proper consideration of and devotion to its special branches is absolutely necessary. Life is too short and scientific advance too rapid, for a human being to stock his brain with all that is known in every branch of his profession; and for individuals to rest content with a smattering only of each and all of its varied sections, means either retrogression or ataxia. It is the special devotion to particular subjects that has so enormously expanded our knowledge of human ailments, and which has led to such specific separation and delimitation of our profession in recent years, into its various sections and branches. In fact, as specialism leads to that research which is ever adding to, correcting, or improving our knowledge in each branch, specialism becomes all the more necessary; in as much as all one can do now-a-days is to obtain anything like a mastery in one medical speciality.

It will be seen from these facts how much we owe to the profession and to our patients in assuming a mastery over any branch of our calling without undergoing a special preparation and training in it. The remarks of *The Lancet* and of Dr. SIMPSON are very apt on this point. Our contemporary enjoins on general practitioners the necessity for inquiring carefully into the reputation for special work of a consultant before sending their patients to him. In so acting, general practitioners can materially suppress any "specialism" abuses which those of mercenary minds may be tempted to practise. And Dr. SIMPSON will have it understood that our patient's welfare claims our first consideration. Prejudice therefore should not, when occasion demands, keep us from sending our patients to proper consultants. Our contention then is, that specialism in our profession, is as much a desideratum as it is in any other. It is more an absolute necessity if we are to advance apace with other branches of science; and no honest practitioner will allow any false pride or petty jealousies to stand between him and his patients' welfare, and prevent him, when he feels his own incompetence in any special case, from referring his patient to the consultant of greatest repute or of well-known efficiency.

COMMENTS AND NEWS.

THE MEDICAL PRACTICE QUESTION IN INDIA.

WE quote from our contemporary on the subject of "official and non-official doctors":—"Our readers may be surprised at the *Indian Planter's Gazette* taking up the subject of medical practice in India, but surprise will give place to the strong conviction that we are well within our sphere of politics, when we lay bare the varied phases of this important matter as it affects our European fellow-subjects in almost every part of this vast Indian Empire. We have been largely led into an earnest consideration of the medical practice question, by reading a series of well-argued and ably written articles that have appeared from time to time in the columns of the *Indian Medical Record*, which during the six years of its prosperous and vigorous existence, has loyally and manfully fought for the cause of independent physicians practising their profession in this land. We have produced quite a number of articles from the *Indian Medical Record* in our own columns from time to time, hoping that a ventilation of the subject would lead to its being properly understood and at the same time serve as a text for such criticism and support as this important public question demands at our hands. With these remarks as a prelude we will try first of all to define the position and work of OFFICIAL AND NON-OFFICIAL DOCTORS in India in general, but more especially in our large cities, and Calcutta in particular. There was a time, over a century ago, when every European doctor in India was a State servant. It is believed that the first independent physician who came to India to set up in practice was a Doctor JOHN C. REDMOND, an Irishman, who settled in the district of Serampore and gained quite a reputation by his skill and good works. Of course as a matter of necessity all the doctoring of European residents up to about fifty years ago, was done by Government doctors, men of the East India Company's service, many of whom amassed huge fortunes, and really deserved their success. During the past thirty years, however, quite a change has been taking over the scene, and the field of medical practice, as it concerns the European and Anglo-Indian community,

which is now patronised by European doctors, for the most part trained in European colleges and universities or a few who have graduated from Indian schools.

Calcutta, Bombay, Madras and Calcutta can boast to-day of as many as three non-official to every single official doctor practising within their limits. It is extraordinary, however, that no change of policy and practice, with regard to the official and private work of Government doctors, has been made during the past fifty or sixty years. This is a most remarkable fact, and it stands out as the only injustice of its kind in the whole of the State Services in India. In no other service, employed and paid by the Government, are its members permitted to perform and to be paid for *private* duties. In fact, such a strange and anomalous privilege is positively denied to men in the Engineering, Public Works, Educational, Judicial and other State-paid departments. What would the Bengal Government say to First Grade Executive Engineer THOMAS MCCARTHY undertaking to design, construct and supervise the erection of the Standard Life Office new buildings during his leisure hours for a certain stipulated fee? Why surely Mr. MCCARTHY would find himself discharged with ignominy from the service of Government. Or suppose that Mr. Chief Secretary WILLIAM JENKINS, C.S.I., who is also a Barrister-at-Law, were to receive clients at his residence after office hours, charging a gold mohur for advice; what would Sir CHARLES ELLIOTT say to such an official? Verily he would conclude that Mr. JENKINS' official work was not enough to keep him fully occupied, and besides warning him that "private enterprise" such as he was indulging in was against Government rules, he would also find *something more* for him to do.

Official doctors are members of the Indian Medical Service who have a covenant to serve in the Indian Army. They hold *military* rank and are styled Lieutenants, Captains, Majors and Lieutenant-Colonels. The higher ranks of Colonels and Generals are forbidden private practice. The word Surgeon is the prefix to the military title in each instance. These officers are ostensibly *military* but they are always employed on civil work. They all hold British diplomas, and are on the whole, fairly well-qualified men. They are allotted to certain State duties as civilians, and they receive handsome monthly salaries for their State work. They have so much leisure time on their hands, that they can earn large fees by extensive private practice.

Non-official doctors have the same diplomas and degrees as their official rivals. They come to this country to make a living by private practice. The majority are excellent men. They should hold the exclusive right to be engaged as family physicians, as medical advisers to mercantile and trading houses, to insurance offices, to railways, port trusts, family pension funds, schools, etc. But traditional usage has rendered the bulk of this vast field of private medical enterprise a huge preserve for official doctors, with whom the emoluments and appointments held by one incumbent pass on to the successor as a sort of hereditary right and title.

Yet Government closes its eyes to this unlawful monopoly and freely permits its paid servants to utilise their leisure hours in "private enterprise," that is, in the remunerative and independent practice of their profession, to the positive detriment of others who are legitimately engaged in private practice and whose bread these Government doctors are most unjustly depriving them of. We say these are facts, and in Calcutta we have them abundantly verified.

It is held that one doctor is sufficient for the medical needs of a community of 1,500 persons, living within a radius of two miles. Granted that the European and Anglo-Indian population of Calcutta is about 10,000, we have over thirty *unaided* independent European physicians practising in the city, or a physician to every thousand of the population.

No one will say Calcutta is fortuitously provided with qualified medical aid for its European community according to such a computation. Yet even with one doctor to every 333 of the population, we find that Government allows its well-paid servants to enter into severe competition with this efficient body of physicians, who are compelled to look to this comparatively small field of private practice alone for their living. Thus a most cruel and unjust rivalry is set up among official and non-official doctors, which is all the more cruelly unjust when it is remembered, that the official doctor is backed by the prestige of a high-sounding military title, by an assured and regular large monthly salary from the Government and by all the conspicuous advantages and privileges that come from being freely and gratuitously advertised in the Government Gazettes and daily periodicals, besides enjoying the monopoly of signing all medical certificates when these are required for even the most obscure State functions. That there is not the smallest justification for official doctors being permitted to engage as general practitioners, on any grounds whatever, we shall abundantly prove in future articles dealing with this subject, and for the present we would ask the earnest attention of our readers to the question of medical practice in India, with the sincere hope that long-standing wrongs and grievances, no matter how deeply rooted and firmly established by precedent or service traditions, shall be abolished in the general interests of the public good.

INDIAN DIPLOMAS FOR SALE.

VERILY those who make laws can break them. Some time back, when BLACKBURN sold diplomas in medicine to certain folk in India and claimed such certificates as holding from JEFFERSON, PA, there was a howl of virtuous indignation, even though the fact remained that the Blackburn papers were sold to those men only who already held junior degrees and had passed all the minor tests of a medical university. Therefore it is with no small surprise that we learn from notification No. 108 of 15th August 1893 and published on page 407 of the *Gazette* for 29th *ibid* that for the small sum of Rs. 50 (less than £3 or \$15) the Punjab Government is prepared to sell the degree of *Bachelor in Medicine* (i.e., M. B.) to any Licentiate of Medicine of two years' standing who can produce certificates (a) of moral and social fitness, (b) of passing in Comparative Anatomy and Physiology and Zoology, and (c) of passing the *Intermediate* examination in Arts. Whether this privilege will be extended to the Military Assistant Surgeons (all of whom have passed the same test required for the L.M.S.) or not, we cannot say, though we might urge that it *ought* to. Yet when we take into consideration the fact that independently of the Arts examination, the standard of education and the test demanded for the M. B., are about six times as hard as those required for the L.M.S., we cannot but conclude that this concession of retrospective elevation, in by no means fair to those M. B.'s who appeared simultaneously for examination with those L. M. S. men to whom this privilege is now extended, and it is more than unfair to the future M.B.'s whose test is considerably raised above that of former years. While it is a decided injustice against the hard worked Assistant Surgeons and Hospital Assistant classes who were educated with these L. M. S. men, and had to pass a *harder* test in *practical* knowledge. Again will not this elevation, on easy conditions of the L. M. S. men *only*, to higher degrees, militate severely against the injustice of not extending the same privilege to those men holding medical titles such as:—O. M. S., C. M. C. C., G. M. C. B., V. L. M. S., D. M. C. C., L. S. A., L. R. C. S., &c. &c., all of which demand a very severe pass, and it must also be remembered that very many of the men holding these diplomas have already passed a higher Arts examination than the "Intermediate"

MILKBORNE DISEASE.

AN APPEAL TO MEDICAL PRACTITIONERS.

MR. ERNEST HART is engaged on a general inquiry, since 1881, on the influence of milk in spreading zymotic disease, and will be much obliged if medical officers, who possess notes of outbreaks of disease traceable to the agency of milk, will be good enough to furnish him with a brief statement of the facts, in the shape of answers to the questions subjoined:—

- | | |
|--------------------------------------------------------|--------------------------------------------------------------------------|
| 1. Date. | 8. Number of milk families involved. |
| 2. Locality. | 9. Sanitary circumstances of farm or dairy from which milk was obtained. |
| 3. Reporter. | 10. Extending cause of outbreak. |
| 4. Total number of cases. | 11. Circumstances implicating milk. |
| 5. Disease. | 12. Facts showing special incidence of disease. |
| 6. Number of cases amongst drinkers of suspected milk. | 13. Reference to report. |
| 7. Number of persons supplied by milkman. | |

THE NEW LIQUOR LAW IN RUSSIA.

WITH a view to diminish drunkenness without reducing the revenue, as well as to regulate the prices of spirits and utterly suppress adulteration and sophistication, the Russian Imperial Government has issued an *ukase* that on and after the 1st July 1898 distilleries, private saloons, bars and liquor shops will be abolished in 8 provinces where the Government will monopolise the manufacture, distribution and sale of spirits. In the July following, the system will be extended to 7 other provinces, and on 1st January 1898 to the remainder of the Russian territories. Suppose India were to follow suit what a deal of good would be done by putting a stop to the import and sale of TONS of vile stuff sold as genuine brandy, whiskey, &c.

THE JUMBLE OF MEDICAL TERMS.

Frequent jumbling up of the macroscopic and typographic significance of terms such as 'descriptive' and 'systematic' as well as the unfortunate grouping together under "one name" of a number of parts that should be *separately* referred to as having separate functions, has so often led to errors in physiological, pathological, medical and surgical parlance and reference, that the *Basic Anatomical Society* appointed a committee to compile a new nomenclature which shall be comprehensive, explicit, rational and more euphonious than the present one, but shall be in Latin, so as to come into universal use. Such a work is urgently needed.

SHORT ITEMS.

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Dr. Dave of Calcutta (the late Dr. Dave) had removed from the nose of a woman, aged 35, who had consulted him for ear trouble. The tooth which was a small canine had for 50 years been growing in a small depression at the junction of the floor and external wall of the nasal cavity, 0.9 inch from the external nares and was easily extricated.

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MILKBORE DISEASE.

AN APPEAL TO MEDICAL PRACTITIONERS.

MR. BENNET HAAS is engaged on a general inquiry, since 1881, on the influence of milk in spreading zymotic disease, and will be much obliged if medical officers, who possess notes of outbreaks of disease traceable to the agency of milk, will be good enough to furnish him with a brief statement of the facts, in the shape of answers to the questions subjoined:—

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Details.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families involved.
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Exciting cause of outbreak.
11. Circumstances implicating milk.
12. Facts showing special incidence of disease.
13. Reference to report.

THE NEW LIQUOR LAW IN RUSSIA.

WITH a view to diminish drunkenness without reducing the revenue, as well as to regulate the prices of spirits and utterly suppress adulteration and sophistication, the Russian Imperial Government has issued an *ukase* that on and after the 1st July 1896 distilleries, private saloons, bars and liquor shops will be abolished in 8 provinces where the Government will monopolise the manufacture, distribution and sale of spirits. In the July following, the system will be extended to 7 other provinces, and on 1st January 1898 to the remainder of the Russian territories. Suppose India were to follow suit what a deal of good would be done by putting a stop to the import and sale of TONS of vile stuff sold as genuine brandy, whisky, &c.

THE JUMBLE OF MEDICAL TERMS.

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VITAL STATISTICS.

| PROVINCES AND TOWNS. | Population according to last census. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population per annum. | Numbers of Deaths FROM | | | |
|----------------------|--------------------------------------|---------------------------------------|---------------|---------------|------------------------------------------|------------------------|------------|--------|-------------------|
| | | | | | | Cholera. | Small-pox. | Fever. | Bowel Complaints. |
| ASSAM.— | | | | | | | | | |
| Goalpara | 452,804 | { For the month of June, '95. | 1,317 | 1,558 | 3.67 | 99 | 22 | 1,370 | 40 |
| Kamrup | 684,249 | | 1,098 | 2,359 | 3.72 | 1,078 | 91 | 777 | 50 |
| Bibangar | 457,274 | | 727 | 1,376 | 3.01 | 413 | 8 | 508 | 210 |
| Sylhet Dist. | 2,154,593 | | 4,104 | 5,193 | 2.41 | 267 | 290 | 2,552 | 544 |
| BENGAL.— | | | | | | | | | |
| Calcutta { Urban | 681,560 | { From 6th July to 31st Aug. 1895. | * | 1,078 | 22.4 | 51 | 11 | 489 | 137 |
| Suburban | | | * | 642 | 30.4 | 84 | 6 | 349 | 135 |
| Howrah | 116,001 | { From 1st June to 31st July 1895. | 2,024 | 1,929 | 27.8 | 168 | 57 | 824 | 283 |
| Patna | 165,192 | { From 1st June to 31st July 1895. | 3,643 | 4,820 | 32.6 | 352 | 68 | 3,143 | 158 |
| BOMBAY.— | | | | | | | | | |
| Bombay | 821,764 | { From 3rd July to 20th Aug. 1895. | 1,610 | 1,796 | 39.20 | 4 | 11 | 463 | 206 |
| BURMA.— | | | | | | | | | |
| Moulmein | 55,785 | { From 21st June to 9th August 1895. | * | 214 | 28.1 | ... | ... | 60 | 29 |
| Rangoon | 180,324 | | * | 480 | 28.8 | 2 | ... | 107 | 41 |
| CENTRAL PROVINCES.— | | | | | | | | | |
| Jubbulpore | 73,155 | { From 22nd June to 24th August 1895. | 200 | 692 | * | 270 | ... | 188 | 48 |
| Nagpur | 117,014 | | 489 | 408 | * | 7 | ... | 224 | 20 |
| Saugor | 32,736 | | 96 | 403 | * | 151 | ... | 94 | 89 |
| MADRAS.— | | | | | | | | | |
| Madras | 425,518 | { From 13th July to 23rd August 1895. | 1,667 | 1,448 | 41.5 | 9 | ... | 523 | 231 |
| Madura | 87,428 | | 213 | 216 | 25.7 | 16 | 3 | 38 | 17 |
| Trichinopoly | 90,609 | | 166 | 162 | 18.6 | ... | 1 | 51 | 20 |
| N.-W. PROVINCES.— | | | | | | | | | |
| Allahabad | 162,895 | { From 3rd May to 14th June 1895. | * | 229 | 0.46 | 2 | ... | 172 | 8 |
| Benares | 213,168 | | * | 660 | 1.5 | 25 | 4 | 353 | 104 |
| Cawnpur | 163,779 | | * | 417 | 0.84 | 2 | 1 | 231 | 1 |
| Lucknow | 244,303 | | * | 525 | 0.71 | 1 | ... | 350 | 20 |
| PUNJAB.— | | | | | | | | | |
| Amritsar | 135,401 | { From 1st July to 17th August 1895. | 340 | 408 | 33.3 | ... | ... | 286 | 20 |
| Delhi | 189,648 | | 822 | 768 | 33.4 | ... | 15 | 430 | 50 |
| Lahore | 189,597 | | 705 | 583 | 24.0 | ... | ... | 810 | 33 |
| Mooltan | 64,265 | | 337 | 216 | 20.0 | ... | 22 | 60 | 31 |
| Peshawar | 63,079 | | 244 | 215 | 29.6 | ... | 22 | 138 | 7 |

* Returns not complete. † Beriberi 23. ‡ Beriberi 5, Kala Azar 19. § Beriberi 11, Kala Azar 241. || Beriberi 7.

OUR LONDON LETTER.

(From our own Correspondent.)

Among items of medical interest lately to the fore and the very first of its kind is a curious deformity in a newly-born babe in whom arrested development of the skull left the brain so unprotected that it threatened to fall out every time the child was moved about.

The Empire of India Exhibition which, is being held in the extensive grounds at Earl's Court, is of a polyglot nature.

There is a representation of an Indian street with shops peopled by native artisans, performing their various duties as silver and goldsmiths, carpet and cotton weavers, printers, potters, and glassblowers. There are a series of

pictures painted in India with samples of ivory carving, Masulipatam and Benares work, Sanskrit M. S. S. of ancient date, &c. Burma has its section with its dancing girls and characteristic music. Indian jugglers perform their feats. There is also an Indian menagerie and lady snake-charmer; and lastly there is a graphic representation of a jungle, by night, with stuffed figures of birds, animals and reptiles in various predatory attitudes.

Cases of abortion are more rife than ever, only a short time back the body of a lady, Mrs. L. SCOTT CAMPBELL, was exhumed at Kensal Green, the post-mortem proving that operative measures had produced miscarriage and death. Dr. W. M. COLLINS has been implicated, but to what extent is yet unknown.

The M. B. watch, manufactured especially for the use of medical men, in all countries, is a unique production.

report of the Board of Health of New York, that in one hundred and eighty-six cases of so-called membranous croup, eighty per cent. showed the signs of true diphtheria, fourteen per cent. showed those of pseudo-diphtheria, and six per cent. were doubtful. To true croup the attack is usually insidious. The voice at first becomes gradually lost. The cough, at first metallic, soon becomes smothered. Attacks of dyspnoea begin at long intervals, but the intervals soon become shorter and irrespective of day or night. All the signs are progressive in character. The diagnosis should be made, if possible, by bacterial examination. The larynx should only be applied to a pathologist's microscope as a warning of the culture of the larynx from the deposits of exudation or false membrane upon its mucous surface. It is true in diphtheria in such a large proportion of cases that every case should be regarded as one of diphtheria, unless definitely proved to be something else.—*Med. Rec.*

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Current Medical Literature.

MEDICINE.

What is Croup.

IN an article under this title DR. HENRY DESSAU, attempts to define the exact meaning of the term croup. Several disorders which vary widely in the nature are called croup. Laryngismus stridulus and catarrhal laryngitis are the commonest of these. The first is practically a manifestation of rickets and is in no sense croup. It often appears as the holding-breath spell of rickety infants in which the face becomes livid, with perhaps convulsive twitching of the muscles of the face, followed by a loud crowing expiration. Catarrhal laryngitis, or false croup, appears in two forms, the spasmodic and the simple. The spasmodic comes on suddenly at night, awaking the child out of sleep and rarely occurs in children under a year old. Its most prominent features are a loud metallic ringing quality of the cough and alarming dyspnoea. The simple form of laryngitis develops gradually with hoarseness and a ringing tone of the cough. It may begin during the day, but becomes more marked at night. There is usually elevation of temperature, and frequently there are attacks of difficult breathing. The voice is never completely lost. It is very difficult to distinguish the form of laryngitis from true diphtheria. When the signs of diphtheria or pseudo-diphtheria have been recognized after such a laryngitis, the case presents great difficulties in diagnosis. According to a recent

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Traumatic Glycosuria.

DR. F. A. HIGGINS and DR. J. B. OGDEN (*Bacter. Medical and Surgical Journal*) remark that in addition to permanent glycosuria following traumatism of the head there is another form mentioned by some observers, and of which a number of cases have been reported. This last form is mostly transitory, and comes on directly after the traumatism or in a few days. On the other hand, the permanent form of glycosuria occurs at a period of weeks or even months afterwards. After giving an account of the various changes of cases met with they summarise their conclusions as follows: 1. That, after injury, sugar may appear in the urine as early as six hours and disappear within twenty-four, the average time for its appearance, however, being from eight to twelve hours; and for the disappearance of the same from the fifth to the ninth day. 2. That a small proportion of the cases may exhibit a permanent glycosuria from the date of injury to the head. 3. That acetone and diacetic acid are rarely, if ever, found in such cases, excepting where the condition becomes a permanent glycosuria, and even then probably only after a number of months or years. 4. That of the twenty sugar cases recorded in the paper, eleven (55 per cent.) had received an injury to the right side of the head, five (25 per cent.) to the left side, three (15 per cent.) to the occiput, and two (10 per cent.) where there was no external evidence of violence. 5. That it is impossible in the present state of the knowledge of the pathology of diabetes and glycosuria to draw any inferences from the necropsies which have been obtained. They are, however, reported in full. 6. There is little to be said in regard to the mortality. Of the twenty cases eight died, six being the direct result of severe injuries, one from intercurrent disease, and one from the probable effects of alcoholism. In the 119 cases sixteen were fatal, 50 per cent., of these having glycosuria. Albumen, together with casts and abnormal blood, was found in every case containing sugar, probably secondary in most instances to the renal irritation produced by the sugar, even though it had been eliminated only a short time.

Neuroses of Childhood.

DR. B. K. RACHFORD after a careful and prolonged study of the effect of a venous condition of the blood in producing neurotic diseases in children, draws the following conclusions:—

1. Both arterial anæmia and venous congestion can excite the nervous system and may therefore be factors in the producing of nervous symptoms.
2. The nervous symptoms resulting from arterial anæmia are very similar to those resulting from venous congestion,

Dr. H. J. HARRIS and HARRISON, respectively, for the effects of epinephrine came from the University of Cambridge. Dr. HARRISON, who is a dangerous infection which frequently suffers from acute septicaemia. Dr. HARRIS reports a case of double urethra, and this is unique in the history of medical science. The remedy against insanitary bakeries is at length showing signs of achieving success in its practical and humane mission. DR. RICHARD THORNE THORNE, C.B., F.R.S., succeeds SIR JOHN SIMON as a member of the General Medical Council. SIR PETER EAPEN, M.D., has for the first time been elected Mayor of Norwich. At the last meeting of the General Council there was a long discussion on the revision of the British pharmacopoeia. The Therapeutic Committee of the British Medical Association has submitted a useful memorandum to the Council.

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and this is because in both conditions there is a venous condition of the blood supplying the nerve centers.

3. Arterial anæmia and venous congestion produce nervous symptoms by producing a malnutrition rather than a simple inanition of the nerve centers.

4. Arterial anæmia and venous congestion weaken the inhibitory centers, and this results in the discharge of force from reflex centers on comparatively slight excitation.

5. Arterial anæmia and venous congestion make more excitable both the reflex centers in the cord, and the more important reflex centers in the medulla oblongata.

The following examples may be cited to indicate the important relationship existing between a venous condition of the blood and the neuroses of childhood.

1. The nervous condition of the blood resulting from a weak or crippled heart, is partially explanatory of the relationship existing between this condition of the heart and certain neuroses such as cholera, hysteria and general nervous irritability.

2. Rheumatism, scarlet fever, diphtheria and other acute diseases which oftentimes produce a weakened condition of the heart, may in this way be indirect factors of neurotic disease.

3. Tuberculosis, chronic intestinal catarrh and other diseases that produce a profound chronic anæmia and resulting malnutrition of the nervous centers may be powerful factors in producing many of the neuroses, such for example as hysteria, incontinence of urine, chorea and spasm.—*Gaillard's Med. Journ.*

Syphilis and Tabes Dorsalis.

THERE are many opinions as to the role played by syphilis in different diseases; one of these is locomotor ataxy, an affection that we believe some physicians look upon as entirely due to this one cause. CARDARELLI believes the importance of syphilis as a cause of tabes dorsalis to be greatly exaggerated, but says that possibly one-third of the cases of ataxy may be of syphilitic origin. When the disease appears twenty or thirty years after the primary chancre, and is not preceded by any decided specific manifestation during this time, he does not believe it to have any casual relationship to the syphilis. Of course, whether this is the case or not, the question has an important influence on treatment. CARDARELLI points out that anti-syphilitic remedies, as a rule, do more harm than good, and says that in any case in which this form of treatment does no good in fifteen to twenty days, it is useless to persevere with it. May not, however, this failure of specific treatment be due to other causes? It must be remembered that the ways of tertiary syphilis are peculiar, and we would point out particularly that the inflammatory exudation, which is a characteristic of that stage, is not long in transforming itself into fibrous tissue, so that, unless taken early, specific drugs cannot be of much avail. Perhaps, could we be sure of getting tabes dorsalis at a very early stage—or, for the matter of that, cases of carcinoma, sarcoma, and other diseases, and were consequently at once able to apply appropriate treatments—our results would shew a decided improvement, and fewer cases would be pronounced incurable.—*Med. Jour. and Hosp. Gazette.*

Hereditary Syphilis in the Second Generation.

GEORGE EITNER recounts the history of a family in the service of Professor BRILMAN in the Nancy Hospital. The paternal grand mother died at the age of fifty-five of syphilitic caries of the os maxilla. The father of the family in question was attacked when thirty-four years of age by an aphasia, which was rapidly cured by mercurial inunctions. He suffered continually from epistaxis, and

was killed by fall from his horse in his thirty-seventh year. The autopsy disclosed no other specific lesions.

In the second generation the statistics of fifteen pregnancies were five abortions; a child of early development, who began to speak at eight years of age; five children afflicted with mental disturbances or with persistent cephalalgia, always ameliorated by antisyphilitic treatment; one daughter who died of suspicious alarvative accident; another girl born in a state of semimacération, attacked later by a painless ulceration of the palatal wall and by an eruption which left linear white cicatrices; lastly, defective dental formation, which this last child shared with one of her sisters. The abortions did not follow the classic type in syphilis. The first was preceded by a normal pregnancy, and it was only much later (pregnancies 7, 9, 12, and 14) that they became frequent. At the same time, however, they coincided largely with the tardy outbreaks in the father, the seventh child being carried at the time of his aphasic attack, and the accidents becoming more serious and more characteristic hereafter.—*N. Y. Med. Rec.*

A Constant Sign of Commencing Meningitis.

THIS consists in the inharmonious movements of the chest and diaphragm. It exists from the beginning, and may serve to reveal its cause even in insidious cases, but requires careful searching. The chest and abdomen must be bared, but not suddenly, or the hyperæsthetic skin will take on accidental movements from the action of the air.

In the first period of meningitis may be seen irregularity of rhythm and inequality of the amplitude or development of the chest. Another sign is the irregular type of respiration and dissonation of the movements of chest and diaphragm. The respiration is effected by the lower respiratory muscles of the chest. Looking at the umbilical region, instead of the normal elevation with each inspiration, there is either immobility or depression. These movements are not connected with the Cheyne-Stokes type of respiration.—*Times and Register.*

Eye-Strain a Cause of Nocturnal Enuresis.

DR. GEO. M. GOULD reports a number of cases of children who were afflicted with nocturnal enuresis, accompanied by many other nervous symptoms, such as night terrors, headaches, chorea, etc., nearly all of which were also relieved or cured by wearing glasses that corrected the visual anomaly. Some of the patients had undergone operation and treatment that had extended over years without relief of the trouble.—*Medical News.*

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SURGERY.

Anchoring the Kidney.

GREATER skill and care in diagnosis has led to the discovery, in recent years, of many cases of movable or floating kidneys. Many patients, therefore, who formerly suffered for months or years from pains, or at least considerable discomfort, in the side, together with, in due course, the formation of degenerative or cystic disease of the kidney, are now speedily relieved or cured. Moreover, it has become recognized that the displacement of the organ is by no means the harmless occurrence which it was formerly considered to be. The twisting of the ureter, necessarily following the displacement of the kidney, leads first to blocking of the duct and then to degenerative changes in the calyces of the organ from pressure of the retained urine. As a clinical fact it is worth remembering that it is more usual to find a movable kidney on the right side than on the left, because the former is, as a rule, located rather lower than the opposite organ.

The operation which has been suggested in America for "anchoring" a flapping or movable kidney, consists in making the ordinary perpendicular incision over the median line of the kidney, usually from two-and-a-half to three inches in length. The incision having been made sufficiently large to permit the introduction of the fingers, the kidney is brought back to its normal position, a needle is inserted through the upper and inner part of the cortical substance of the organ and then through the muscles of the back, and out through the skin on each side, the peritoneal surfaces being scarified so as to favor the formation of adhesions. A second needle is passed about an inch from the other through the upper and inner part of the kidney and out through the muscles and integument, and the sutures are then tied outside on the skin. In tying them it should be remembered that they must be drawn sufficiently tight not only to hold the organ in place, but also to produce sufficient irritation to excite inflammatory adhesions, and yet not so tight as to tear through the substance of the kidney. The rest of the abdominal wound is then closed in the ordinary manner, and the sutures are left in place for ten days or a fortnight. It is claimed that the operation is not only simple and rapid, practically bloodless and safe, but that its results are excellent.—*Med. Times and Hosp. Gaz.*

Rules for Trephining in Injury of the Skull.

1. ALL cases of depressed fracture, either simple or compound, require trephining and elevation, whether there be pressure symptoms or not.
2. All punctured fractures and gunshot wounds imperatively indicate the use of the trephine.
3. In simple fracture of the skull, where any symptoms of brain trouble persist, exploratory operation should be done.
4. In all cases of local injury to the skull, whether fracture or bruise, followed by evidence of inflammation of bone or persistent symptoms of brain irritation, or of pus between the bone and dura, the trephine should be resorted to.
5. In every case of localized injury to the head where unconsciousness persists for more than an hour, exploratory operation, including opening the skull if necessary, should be done.
6. The appearance of stupor some hours after a head injury indicates meningeal hemorrhage and requires trephining at the point of injury, if known, or at point indicated by cerebral localisation, the middle meningeal being the usual source of trouble.
7. Even in very extensive injury to the head operation should be made since removal of fragments, restoration of normal contour and cleaning of injured tissues can add but little to the danger and may save life.
8. In every case of doubt exploratory operation is justifiable.
9. Compound fractures, with or without apparent depression, demand enlargement of the wound and careful exploration.—*St. Louis Clinique.*

First Aid to Persons Injured by Electric Currents.

PROFESSOR GAZIEL, presents the following as his conclusions:—

When a person meets with an accident due to contact with electric conductors or generators, the contact must first be broken. If it still exists, as otherwise those who come to render assistance may also become victims of the same accident;

The victim is to be carried to a well-ventilated room, from which all persons except, at the most, three or four assistants, are excluded;

The clothing should be loosened at once, and efforts are to be made at the earliest possible moment to re-establish respiration and circulation.

Lastly:—

To restore respiration, recourse should be had mainly to the following two procedures: Rhythmical traction on the tongue and artificial respiration; but both must be continued for a sufficiently long time:

Lastly, concurrently with these procedures, the circulation should be stimulated by rubbing of the skin, flagellation of the trunk with the hand or wet towels, and any other means usually resorted to in such cases:—*Amer. Med. Surg. Bull.*

The Hygiene of the Eyes.

For the preservation of the eye-sight Dr. L. W. FOX, Professor of Ophthalmology, Medico-Chirurgical College, Philadelphia advises us:—

- (1) Avoid sudden changes from dark to brilliant light, stimulants and drugs affecting the nervous system, and reading when lying down, or when mentally and physically exhausted.
- (2) When the eyes feel tired, rest them by looking at objects at a long distance.
- (3) Pay special attention to the hygiene of the body, for what tends to promote the general health benefits the eye.
- (4) Up to forty years of age, bathe the eyes twice daily in cold water; but after fifty, bathe them morning and evening with water as hot as you can stand; follow this with cold water, this will make them glow with warmth.
- (5) Old persons should avoid reading much by artificial light, be guarded as to diet, avoid sitting up late at night and not depend on their own judgment in selecting spectacles.
- (6) Do not give up in despair when informed that cataract is developing: in these days of advancing surgery it can be removed with little danger to the vision.

Congenital Absence of the Entire Tibia.

JOACHIMSTHAL reports the following case:—A little girl, one and a half year old, came to Professor WOLFF's clinic. The right tibia was entirely absent, the foot in a marked position of varus, and the fibula, which was the only bone present in the leg, did not articulate with the femur, but could be felt behind it. The condyles of the femur were very prominent, and the patella could be felt in the inter-condylar notch. The fibula was two and a half centimetres shorter than its fellow, and much thicker. The right buttock was somewhat smaller than the left. The leg was flexed on the thigh. WOLFF corrected the varus after tenotomy of the ten to Achilles. By means of a long incision, free access was gained to the knee-joint. There were no semilunar cartilages nor crucial ligaments. The head of the fibula was pulled down until it rested between the condyles of the femur, no section being taken from it in order to avoid still further shortening the leg. The capsule was then stitched. As the leg could be completely extended on the thigh after the operation, it was put up in a slightly flexed position in a plaster of Paris bandage, which at the same time retained the foot in good position.—(*Arch. de Orthoped.—Hospital*)

Supra-pubic Cystotomy for Calculus.

DR. A. H. MEISENBACH sums up a paper on this subject with the following conclusions: 1. That the transverse incision is more easily executed from an oblique standpoint. 2. That it affords more space in which to work in the depths

of the wound than the median incision, and seems to be superior to any exploration of the bladder, for whatever condition. 2. That there is less liability to injury of the peritoneum, because the incision is parallel with and on a level below its lowest fold. 3. That it is unnecessary to inflate the rectum. 4. That it is unnecessary to inject the bladder, and consequently this risk of injury to the organ is avoided, which in the aged is an element that should always be considered. 5. That the catheter in the bladder is a safe guide to the location of the fundus and anterior wall. 7. That with the catheter as a guide, the bladder can be incised with ease and facility.—*Jour. Amer. Med. Assoc.*

A New Method of Cholecystotomy.

BLOCK describes a new method of performing cholecystotomy with a view to avoiding peritonitis, and the formation of firm adhesions between the gall-bladder and the abdominal wall after the establishment of a temporary fistula. In the method called extra-abdominal cholecystotomy, which was successfully practised by him the distended gall-bladder is drawn through the abdominal wound, (and a portion about the size of a hen's egg outside this wound) by sutures, until adhesions have formed and the peritoneal cavity has been closed. The gall-bladder is then opened, the gall-stones, if any contain, are removed, and the wound, in its coats, having been closed by sutures, the gall-bladder, after a further interval to allow of complete cicatrization, is separated from the margins of the incision in the abdominal wall and returned into the peritoneal cavity when the external wound is finally closed.

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OBSTETRICS AND GYNECOLOGY.

Uterine Gonorrhoea.

WETHEIM believes that next to the urethra the uterus is the most common seat of gonorrhoea. The germ sets up true acute interstitial endometritis; in chronic disease the glandular tissue of the endometrium is greatly increased. The muscular coat is often involved, and a kind of sclerosis of the vessels occurs, whilst the connective tissue undergoes hyperplasia at the cost of the muscle cells. Gonoecocci are usually to be found in the inflamed mucosa, yet sometimes they are entirely absent, and they rarely, if ever, can be detected in the exudations in the muscular coat. The os internum offers no protection to the entrance of gonorrhoeal poison into the uterine cavity. The cervix is less involved, and the disease is always least marked nearest the os externum. The puerperium is the most dangerous condition when gonorrhoea exists in the genital tract lower than the uterus. Menstruation, coitus, and the sound are much less liable to expose the uterine cavity to gonorrhoeal infection.—*R. M. J.*

Pregnancy with Imperforate Hymen.

BRAYN was consulted by a newly-married woman who had found herself unfit for complete cohabitation. He examined and found a vaginal appearance of the external parts, a tight and narrow hymen, and pregnancy advanced to the fifth month. The patient had a generally contracted funduliform pelvis, and caesarean was needed at the end of pregnancy. BRAYN notes that penetration must have been impossible in this case, where pregnancy occurred before the patient suspected it.—*R. M. J.*

Thirst Following Abdominal Section.

In the column of the paper read by Dr. HUGHES BORTH, at Royal Society, before the Anatomical Society,

logical and Obstetrical Societies, for abstracting water from the abdominal vessels, that the sensation of thirst is caused by the withdrawal of water from the vessels in the veins depleted by excessive perspiration, thirst following abdominal section is caused by the withdrawal of water from the abdominal vessels to fill veins partially collapsed by reason of diminished blood supply, because of contraction of the arteries of the viscera. The sensation invariably follows the withdrawal of any considerable amount of fluid from the body; the withdrawal of such fluid causes proportionate collapse of veins and capillaries. Capillaries tend to remain at normal tension, and when suddenly collapsed in any degree attempt to regain that tension by taking water from the surrounding tissues. Irritation of sympathetic nerves causes contraction of the arterioles supplied by such nerves. Sudden contraction of the arterioles supplying any organ is followed by lessened tension in the capillaries and small veins of that organ. Abdominal section invariably causes direct and reflex irritation of the abdominal sympathetic nerves. Such irritation causes contraction, in some degree, of the arterioles of the abdominal viscera, with consequent lessened tension in their capillaries, and compensatory withdrawal of water from their tissues.

In this connection the practice of some of the modern gynecologists is interesting. A pint of water, at blood heat, is injected into the rectum, and this is repeated every three or four hours for the first twenty-four hours. The fluid is given through a soft rubber catheter attached to a DAVIDSON'S syringe and thrown in very slowly. In cases where there is flatus, quinine is given dissolved in the water. Under this treatment the thirst is much alleviated, the pulse regains its fullness and strength, and the shock seems to be combated much better.—*Pac. Med. Jour.*

Diet in Pregnancy.

DR. EICHMOLL, of Kreuznach, maintains that a large proportion of the discomforts and difficulties preceding, attending, and following parturition might be avoided by a rigid adherence to some simple dietetic rules. Excess of albumen and of water are, he considers, the errors against which pregnant women should be warned, as tending respectively to excessive development of the foetus and secretion of amniotic fluid. His rules are: Meat only once a day, and that in small quantity, and rarely if ever salted; green vegetables, salad, potatoes, bread and butter, but avoiding, as far as possible, eggs, peas, and beans as being too rich in albumen. Thirst is to be quenched by milk or water in very moderate quantities, cocoa is preferred to tea and coffee. Wine, beer, and spirits to be forbidden, and drink of any kind raising the sense of urgent thirst; but fruit, raw or cooked, to be indulged in *ad libitum*. The general result of such a diet he found to be a remarkable feeling of well-being; the sense of fulness, heaving down, and weariness, thirst and constipation, soon disappeared, and the patients have been able to walk many miles up to the end of confinement. His own wife would leap ditches and climb hills, and even on one occasion rode on a horse for an hour. The ease and rapidity of the delivery of several consecutive cases, some of whom had previously had difficult or difficult labor, the small amount of liquor amnii, and not more than a teaspoonful and sometimes less of liquor loquax were striking, and all without any special treatment. The children were healthy and well-nourished, weighing 7 to 8 lbs. and the placenta were of good size, 10 to 12 oz.

also noted, though not until the cyanosis had become quite marked; in fact, in the earlier years of cyanosis the increase in number was only relative. In individuals of from twelve to twenty years of age blood-counts of from 5,600,000 to 6,800,000 were found the diameter of the corpuscles varying from 7.9 μ to 13 μ . VACQUEZ does not think that the increase in number of the corpuscles was parallel to the increase in diameter, but thinks that both are due to the same cause. At the same time with the increase in size and number of the corpuscles, there is an increase in the amount of hemoglobin in each individual corpuscle, so that the hemoglobin does not show its normal relation to the number of corpuscles. The question as to whether the increase in size of the corpuscle or the increase in hemoglobin is the primary process cannot well be answered. The process has been explained on the grounds that in cyanosis the supply of oxygen carried to the tissues is insufficient, and that the corpuscular new-formation is compensatory. "In venous stasis the corpuscles are insufficiently oxygenated; they cannot perform such an active part as oxygen-carriers, and they cannot yield too much oxygen to the tissues. It must further be remembered that in cyanosis there is less metabolism in the tissues, and therefore less waste produced. In a word, the functions of the corpuscles being lessened, the wear and tear which they undergo are reduced and the duration of their individual existence increased. The number of the corpuscles must in this way be proportionately augmented, and this must lead to the numerical increase as well as to the high percentage of hemoglobin, until a balance is struck between the production and the destruction of the blood-corpuscles.—*The American Journal of the Medical Sciences.*

Nucleated Red Corpuscles in the Blood.

ZENONIS' experiments were made on dogs, guinea-pigs, and rabbits, in whose blood he had previously satisfied himself that there were no circulating nucleated red-blood corpuscles. He chose a dog weighing 6,700 klog., and in ten repeated operations withdrew from it a total of 1,830 c.c. of its blood then, after defibrinating the blood, he re-injected it into the circulation, and in an hour and a half after the operation noticed the appearance of nucleated red corpuscles, in the circulating blood, on examining a specimen under the microscope. He thinks that the rapid appearance of these corpuscles is due to the mechanical effect produced by the withdrawal of blood, for after repeated bleedings they appear too soon for their re-appearance to be due to a hematopoietic reaction; moreover, eight or nine days afterward they are no longer noticed, exactly when the hematopoietic reaction is at its maximum. He further thinks that after loss of blood these corpuscles are mechanically drawn into the circulation from their normal site, the bone marrow; that a certain number of them get stopped in the spleen, proliferate there, and give to the spleen that fatal hematopoietic function which has been ascribed to it by BIZZORZO as taking place after hemorrhage.

Influence of Coffee on Disease Germs.

PROFESSOR WAX arrives at the following conclusions:—

1. An infusion of coffee, when taken either as a beverage in the ordinary way, or with meat bouillon, undoubtedly acts as a disinfectant.
2. The disinfecting properties of coffee depend on the formation of certain overtones during the process of roasting; also on the tannic acid which it always contains.
3. The germicidal efficacy (such as it is) of acorn-coffee, rice-coffee, etc., is likewise developed by roasting.

4. An infusion of coffee or one of its substitutes made with water only, is a much better disinfectant than another of the same strength but mixed with meat bouillon.

5. A pure watery infusion of coffee of the same strength kills the bacilli of cholera within three hours, typhoid bacilli in one day, and the spores of the Siberian plague within nine days. Coffee substitutes, in like infusions, destroy the two former species of germs, but not those of the plague.—*N. Y. Med. Journ.*

Cheese a Carrier of Disease.

Not only is cheese liable to be poisonous by the development of tyrotoxicon, but it may prove to be a carrier of disease germs. DR. BEEBE, Assistant Chemist of the Board of Health in New York city, recently found the true bacillus of diphtheria in a lot of suspected cheese, and as the result of this discovery, a large quantity of the cheese was seized and destroyed.

It is said that there were several fatal cases of diphtheria in the family of a farmer who supplied much of the milk from which the cheese was made, and the germs conveyed by the milk from this infected house lived through the process of cheese-making, and communicated the disease to several who ate the cheese.

It has been known for a long time that milk was an excellent medium for the growth of bacteria, and therefore, of course, for the taking up of any infection and the spread of the same. No doubt many serious illnesses or diseases have been caused in this way, though traced supposedly to other sources.

The day is soon coming when no one will think of using milk without first pasteurizing or sterilizing it.—*N. E. Kitchen Magazine.*

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THE great problems in medicine to-day are hygienic, not therapeutic, though therapeutics seem to be getting the better of diphtheria. The most desirable thing in the affairs of man is, first, the making of people healthy, and second, the making of them happy. The dyspeptic Puritanism which whines over the necessity of suffering as a means of grace can have no place in a superstition-free and scientifically enlightened philosophy. What we want, and what hygiene is yet to give us, are comfortable homes for all mankind, aseptic alike of the germs of symptomatic disease and of the taints of common vices, where noble and healthful men, noble because they are strong and healthful, and sweet and beautiful and healthful women, beautiful and sweet because they are healthful, shall rear their little families of disease-unbought children, happy because healthful, and giving promise of future attainment to the good, the beautiful, and the true—promise which shall not be broken because hygienic medicine has made the keeping of such promise possible.—*PROFESSOR H. A. COTTRELL, University of Louisville.*

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...and that daily, and not the field... being fit together too... his mind in enjoyment and freedom, and... He will accustom... until they burden his mind. He will become more and more dependent and... His mental horizon will grow narrower continually and... The plastic brain of youth, that is, its docility and adaptability, will become less and less active and capable of comprehending and elaborating new thoughts. On the other hand, mental labor preserves the plasticity of the brain to a much more advanced age. Idlers, therefore, in spite of the best brain capacity, become prematurely old mentally, narrow-beamed, limited in horizon, and not seldom absolutely stupid. We often observe moderately gifted students becoming, by means of work, men of power; and highly gifted young men, by means of idleness, gradually grow useless, peevish, and now and then narrow-minded. "Nervousness," really brought about by means of mental overwork, forms only a small and comparatively safe fraction, while the great innumerable company of mental wrecks nearly always owe their catastrophe to diseased or defective brain conditions, to excesses, and an enormous percentage to alcohol. Professor HILTZ is certainly right, for he believes that the happiness of an individual (and he might have added his health also) depends upon his fulfilling the purpose of life by labor.

VOLTAIRE'S motto was "Always at work;" CARLYLE says, "Work alone is noble." CHARLES LAMB gives this warning: "No work is worse than overwork; the mind preys on itself—the most unwholesome food."—*Union Signal*.

Infection by a Midwife.

A WOMAN died of septicæmia after confinement and at the inquest the Blackburn District Coroner found that the septic infection that killed the woman was probably conveyed by the midwife going straight from one patient to another without disinfecting herself.

A Medical Witness.

In a Tacoma court, being asked whether medicine was an art or a science, replied with a sigh that it was neither one nor the other, but as yet merely an experiment.—*N. Y. Record*.

Syphilis in the Army vs. Licensed Prostitution.

In the French army the largest proportion of venereal disease was found in 1875—74 per 1,000. In the English army the proportion was 139 per 1,000. The highest figure was reached two years later, 374 per 1,000; while in the French army the figure stood as low as 52 per 1,000. From the figures the speaker concluded that venereal disease is much more frequent in countries where free prostitution exists than in those where it is licensed. This opinion might easily be learned *conversim*, but it would not make an argument in favor of licensed prostitution for several reasons. In the first place, some of the best medical authorities have spoken freely against licensed houses, asserting that they are no guarantee whatever against venereal disease, and an agitation is being set on foot in urging the Government to close them. His own official experience was that gonorrhœa was the inevitable result of a visit to one of these institutions. He could not have sworn as to syphilis, but he had known of several cases during the same years. Secondly, these houses are not under medical supervision, and the midwife is ready to supply all the means for the infection. Again, it should not be inferred from these statistics that the English

soldier is more virtuous than his French equivalent. The French soldier, if he had the means, can provide himself with a mistress—an institution unknown, as a rule, to the English soldier. Chastetude prevails in France by the increase in France, especially since restrictions have been in a great measure removed from the opening of liquor shops.—*Edin. Med. Jour.*

THERAPEUTICS AND PHARMACOLOGY. Typhoid Antitoxin.

PRIFER AND BEUMER at the Congress for Internal Medicine at Munich, referred to their earlier experiments, which showed that the toxin of typhoid cultivation is contained chiefly in the bacilli themselves; for after passing a cultivation through a Chamberland filter the filtrate was less virulent than before. The bacilli are killed, without damage to the virulence of the cultivation, by warming for an hour at 55° to 60°C. Their recent experiments show that by repeatedly injecting small quantities of virulent cultivations into sheep, antitoxic substances are formed in the organism which prevent the poisonous action from showing itself. The action of this antitoxic serum depends on its power of destroying, not the bacteria, but the poison. By injecting previously or at the same time antitoxic serum, mice and guinea-pigs were protected with certainty against double or treble the fatal dose of a virulent cultivation, and even if injected with the antitoxin one to four hours after the fatal dose was given, they could be cured.—*R. M. J.*

Glucose as Food.

DR. E. H. BARTLEY criticises the long-accepted opinion, that commercial glucose is suitable as a food. This opinion was promulgated some years ago by a committee of American chemists, appointed partly under Government auspices, and has been made the basis for justification of much substitution and adulteration. In the same way the opinions of some eminent chemists in favor of oleomargarin have been extensively quoted in defence of that article. DR. BARTLEY points out that mere chemical knowledge or even experiments on the lower animals or healthy subjects for a brief period are not sufficient to establish the harmlessness of a substitute food. Glucose made from starch by the action of acid is not the same as the product of digestion by animal ferments, and it is not likely that it will be a satisfactory substitute for the forms of sugar that arise in the process of normal digestion.—*New York Med. Jour.*

Gonorrhœa.

If seen during the inflammatory stage, give aloin pills 1 grain (0.065 gramme) each, to produce active purgation. This is an important point often overlooked. Not only does the aloin improve the appetite, but it also prevents chills and gonorrhœal synovitis, and renders the inflammation less severe. Twist a fine layer of cotton wool about a lucifer match, cover it with ointment made of dilute nitrate of mercury to which morphine has been added, 1 grain to the ounce (0.065 gramme to 31 grammes), and pass into the urethra three or four times a day. At the same time give an alkaline mixture containing hyoscyamine. Should the cure not be seen until three weeks have passed, give injections of liquor plumbi subacetatis, 1 drachm (4 grammes) to 4 ounces (160 grammes) of chloroform-water, with small doses of an emulsion of cod-liver oil, by the mouth. Give aloin to prevent the dysuria and pain in the urine caused by the copals.—*Brit. Med. Jour.*

Treatment of Burns and Scalds.

In emergency cases of dermatitis ambustionis of the second degree, i.e., burns and scalds, the old-fashioned castor oil, or corn starch, with the addition of boric acid, oxide of zinc, salicylic acid, bismuth, dermatol, etc., is far more effective and reliable than iodoform. Or, if lotions or the continuous bath are used, solutions of boric acid or liquor aluminii acetici (ten per cent.) are preferable to solutions of carbolic acid, sublimate, etc. In herpes zoster, simple corn starch, dusted on freely and bound down carefully by the aid of a thick layer of absorbent cotton, is by far the best treatment. In two cases of this disease I have seen the lesions break down and an extensive dermatitis develop under a dressing of iodoform gauze. In a case of intertrigo between the legs of a female infant, a dressing with carbolic acid gave rise to deep ulceration.—DR. F. J. LEVISEUR in *N. Y. Med. Rec.*

The Cold Bath in the Pneumonia of Children.

M. COMBY calls attention to the excellent effects yielded by balneotherapy in the pneumonia of quite young infants. Applied at a temperature of 25° or 20° C., according to age and circumstances, the cold bath is most serviceable in reducing the temperature, restoring lost tone, and slowing the pulse and respiration. Chemical antithermic agents, such as antipyrin, quinine, &c., are generally useless and may be dangerous. In his wards M. COMBY gives cold baths to all his little pneumonic patients whose temperature exceeds 39° C. (102.2° F.) and whose hearts are not diseased. Quite recently he had an opportunity of noting the good effects of this treatment in a little boy affected with influenzal pneumonia of the right apex, uninfluenced by ordinary antithermic drugs. M. COMBY adds that baths of 25° C. are quite well supported by even very young infants. M. SEVESTRE states that the application of the above method of treatment determines the onset of the crisis, on the fifth instead of the seventh day and so materially shortens the duration of the disease. M. RENDU also characterises the cold bath treatment as the best means of obtaining prompt deferescence in the pneumonia of adults. M. SIREDEY informs us that at the Ambervilliers fever hospital he has derived great advantage from the employment of cold baths in the treatment of broncho-pneumonia, consecutive to specific fevers, and M. Le GENDRE made a statement corroborative of their efficacy in all congestive complications of eruptive fevers. Professor HAYEM says that at the Hospital St. Antoine the most fatal disease of all is pneumonia, and that eighteen out of twenty of these patients are "alcoholics." During the first two years, 1879-1880, of his physicianship at that hospital he lost 50 per cent. of these cases. He then instituted the cold bath treatment and the mortality fell to 27 or 28 per cent. For some time past this mortality has further diminished (to 8 or 10 per cent.), but this improvement he ascribes to a new special treatment he has devised for the benefit of these alcoholic patients. Employed in the *criche*s attached to his wards, Professor HAYEM finds the cold baths more powerful for good against pneumonia than when used for adults.—*Lancet*.

Boiled Wheat with Lemon Sauce.

SELECT newly cut wheat, well rubbed or threshed out. Look it over carefully, wash, and put to cook in five times its measure of water. Cook gently until the grains burst open, and can be readily washed between the fingers. This will require from four to ten hours, the time depending upon the age and variety of the wheat used. To prepare the sauce,

heat a pint of water in the inner cup of a double-boiler. Soak this, when boiling, stir a dessert-spoonful of gum-starch, previously rubbed smooth with a little cold water, each five or ten minutes, until it thickens. Score a large lemon with the tines of a silver fork, and when the oil is swelling, add a small quantity of sugar over the surface, to flavor it. Afterward cut the lemon and squeeze the juice from it. Add the juice and one half-cup of the flavored sugar to the hot corn-starch mixture, allow the whole to boil up once, stirring constantly, then take from the fire and serve hot or cold on hot grains.

Fruit Tapioca.

Cook three-fourths of a cup of pearl tapioca in four cups of water until smooth and transparent. Stir into it tightly a pint of fresh strawberries, raspberries, or currants, adding sugar as required. Serve cold with cream, or a pudding sauce, prepared by heating a pint of the berry juice to scalding and stirring into it a tablespoonful of cornstarch previously rubbed to a cream with a little cold water. Cook until it thickens, then add sugar according to the acidity of the fruit. Strain and cool before using.

Correspondence.

MR. HART ON THE MEDICAL SERVICES.*

TO THE EDITOR "ENGLISHMAN."

SIR,—You have published in full MR. ERNEST HART's address at the annual meeting of the British Medical Association in London, and I ask you to permit me to reply to some of his remarks. MR. HART is a typical example of the "Paget, M. P. class of winter visitor" to India. He came out full of preconceived ideas, spent a few months here, chiefly employed in collecting facts in support of these ideas, and went home and claimed to be an expert on matters Indian from "a study of the health conditions of India." He made, to my knowledge, no study of the social conditions of Indian native life; he never visited an Indian village, or an Indian jail, or an Indian hospital, at least during his stay in Calcutta. He took in nothing in respect to the binding trammels of caste prejudice among the natives, and as regards the facts of native life of the millions of India he is almost as ignorant as if he had never left London. And yet he presumes to lash the Indian Medical Service and Indian officials generally on account of their neglect in not having introduced sanitary reforms which are only just becoming understood in England.

We doctors understand the enormous debt the people of England owe, but recognise, to MR. HART and other pioneers in Sanitary Science. MR. HART is not reticent in his address on his personal claims to public gratitude; but we in India have yet to learn that preventable disease has been abolished in England; that the people there all boil their drinking water, and that typhoid fever, diphtheria, and other filth and waterborne diseases are as extinct as the Dodo. MR. HART came to India like ALEXANDER seeking fresh worlds to conquer. It is "official apathy and stolid resistance" with him that is the reason why cholera, malaria, and dysentery are still Indian scourges. If MR. HART had been able to fever a meeting of the Calcutta Municipality with a view to some sanitary

* I reproduced from the *Englishman*.

reform was under discussion, he would have realised the more than stolid resistance to change and reform of the natives mind. But in his opinion the Indian Medical Service is the culprit: its senior officers know nothing of Laveran's bodies, or treat them with contempt; they never heard of the good effect of boiling drinking water, though this is a common practice in Anglo-Indian households, and therefore a service which has done as much as any other towards the civilisation and sanitation of India is to be abolished in its present form.

MR. HART conveyed what he must have known would be an entirely false impression when he told the London meeting that there was "no civil medical service in India," that it was only "a military service dislocated and called civil to hide its defects." He was usually the guest while in India of these civil military medical officers, and probably saw them going to official functions in uniform; he concluded, therefore, that these men were no doctors or civilians, they were only military officers. If he had taken the trouble to look at a Civil List he would have found that most, if not all, of them had spent nine-tenths or more of their service in varied civil employ, and were thoroughly acquainted with native life, native wants, native ways, and native prejudices. But such knowledge did not suit him: *delenda est Carthago*: these men are ignorant soldiers, they know nothing of Laveran's bodies or of the value of the tea kettle, they must be sent back to doctor sepoy in the regiments from which they should never have been withdrawn. All the good work of the Indian Medical Service in its civil branch, for the last hundred years, in infusil dispensaries and jails, in vaccination, in medical schools where European medicine, surgery and midwifery have been taught, and in endless other ways, is overlooked because the sanitary service and conditions of primitive India are not up to the European scientific standard. I do not say condition, for we know that Europe is still far from perfect in spite of the efforts of Mr. HART and his colleagues during the past thirty years. Another Royal Commission is demanded. In spite of the results of the Opium and the Hemp Drugs Commission, Government is to maintain a civil medical service not liable to military duty in case of emergency, promotion is not to go by seniority but by merit, good ordinary work of long years of service is to be ignored unless a man is familiar with the latest microbe discovered by some leisured scientist at home.

Truly the burden laid upon us out here by the faddist globe-trotter is becoming intolerable. There are facts of Mr. HART's address which are undoubtedly true—his criticism of the army regulations regarding cholera, though he omits to notice the fact that these do order the boiling of drinking water; his appeal for pure water-supply and proper filtration of water, his desire for a really scientific investigation of outbreaks of cholera and typhoid fever—but he blames the Indian Medical Service for errors regarding British troops and seems to be ignorant, though he has spent some months in India, that all matters regarding British troops are in the hands of the Army Medical, not the Indian Medical, Service.

MR. HART acknowledges "the remarkable ability, the enormous power of work, and the excessive overwork of

Indian Medical Officers," but these attributes are apparently only those of the juniors, for when these same officers become seniors, say at the age of 50, or 20 years younger than Mr. HART himself, "they are scientifically and administratively incapable of fulfilling the positions to which they have risen; by reason of their age and antiquated notions." It is a pity that Mr. HART, should have spoiled a truly useful address by his unworthy attack on the Indian Medical Service. One of Mr. HART's extremely practical suggestions when out here was that the zemindars in all villages throughout the land should be made, or urged to make arrangements for providing boiled drinking water for all their tenants, a common boiler and a common cistern for all the inhabitants of each village—from which the Brahman and the Dome, the Hindu and the Mussulman shall take their supply!—the zemindar, of course, paying the whole cost, the upkeep and establishment necessary. The caste prejudices regarding drinking water are also of course a matter of no moment, nor is the cost.

If these well-meaning reforming globe-trotters would only take the trouble of trying to understand the differences between the people of India and the people of Europe, the difference in customs and habits due to race, religion, climate, etc., and would temper with a small amount of commonsense their recommendations, we should welcome their suggestions and value their help in our arduous task of improving the physical, sanitary, and social conditions of a poor Oriental country.

I have known Mr. ERNEST HART personally for over thirty years. He was Dean of the School when I entered at St. Mary's in 1864. I have often met him when I have been at home on furlough, and have spoken to him of his long proposed visit to India, and he was my guest for nearly a month last cold weather; but I consider it is all the more my duty to call attention to Mr. HART's inaccuracies and deficient knowledge when he makes such an attack as that contained in his address on the service to which I have the honor to belong, and in which, alas! I must now have become an antiquated and incapable senior

Yours, &c., C. H. JOUBERT, M.B., London, F.R.C.S.,
Surgeon-Lieutenant-Colonel.

CALCUTTA, 28th August 1895.

II.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—MR. HART's address before the British Medical Association seems to have roused a veritable hornet's nest if I may judge by the various letters, evidently emanating from the pens of official medical men, but published in the local *dailies* under pseudonyms such as "Fair Play" &c., that might convey the impression that the writers were private practitioners.

I do not hold with a weather cock spirit, nor can I admire a policy that simultaneously blows hot and cold, nor yet forget that the printer's ink is barely dry on the unjust, terrific and insulting onslaught made by Mr. ERNEST HART against the civil medical practitioners of India, but I cannot but agree with the main issues of his contention that as round pegs cannot fit square holes, the medical services badly need re-casting, and that the

Commissioned Medical Service is not by any means so heavily overburdened as the Commission is pleased to be.

FAIR PLAY (say) and one or two other spectroscopic Mr. HART and declares that in reviewing the medical services of India he has hopelessly muddled the Army and the Indian Medical Services, together by speaking of them as the *Military Medical Services*. What a spitting of bile! A distinction with mighty little difference as both the A. M. S. and I. M. S. are military services and both hold pseudo-civil appointments in which they are expected to squeeze the duties of from 100 to 300 hours into a meagre working day of 8 hours (at most) and the energy obtained by the bodies of each one of them is supposed to be infinitely more than what Nature supplies for at least a dozen other human beings—the difference lies only in the fact that the A. M. S. was created for the British and the I. M. S. for the East India Company's troops.

True, Sir, quite true, that the routine work laid down for the Commissioned Medical Service is really heavy—so heavy indeed that they would die under it in less than a month if they only did a *sixth* of the work the regulations lay down they *should* do. That the work is done there is not the least doubt. But *who* does it? The Surgeons (Lieutenants, Captains, Majors) &c? No certainly not, they are gazetted "in charge," and it would be derogatory to them to do more than supervise, sign statistical and requisition forms, write up an occasional case or report: else they could not possibly find the time for polo, theatricals, more private practice than State work and lengthy disquisitions, for public aggrandisement, in the lay journals.

Now, Sir, if instead of coming out to India and rushing hither and thither after PASTEUR filters, fine theories and bacillar chambers, had Mr. HART visited the great hospitals of India, *in person*, he would have been in a far better position than he now is to render unto Caesar what should Caesar's be, and *wholly* agreeing with me that infinitely more work of a *better* quality would be done besides a *huge* saving effected were the medical services reduced by, at the very least, *three-fourths* of the numerical strength they now obtain, he would never have ignored the Civil Hospital Assistants and Military Assistant Surgeons, on whose shoulders devolves the *whole* of the heavy work with which the Commissioned Medical Service is so overburdened.

In a letter to the *Englishman* (28th August 1895) Surgeon Lieutenant-Colonel C. H. JOUBERT, M. B. &c. inveighs bitterly against Mr. HART's demand for a re-constituting of the medical services and, in so doing, does the very thing, he would heavily deprecate in a private practitioner, i.e. washing professional dirty linen in the columns of a lay journal and flaunting his academic qualifications. Dr. JOUBERT resists recasting; but let him change places with the civil practitioner and ask him whether as a man he can honestly say that Mr. HART is utterly wrong in condemning a military hierarchy and insisting that the military services should be confined to the army, while work, not more specially, should be assigned to the granting of responsible official posts? Would he consent to let that a highly paid official be permitted to neglect his public duties and enter into open competi-

tioning a subordinate in the execution of his duties? Would he consent to let a subordinate who is not a member of the medical profession to criticise his official duties? Would he consent to let a subordinate give any valid reason, however plausible, for his own existence? Holding a military rank and Commission in the Indian Medical Service will he still persist in declaring that he is not a military man because he is temporarily attached to the Civil list? Can he deny the existence of that year after year the Indian Colleges are turning out so smart and able men as have ever passed out from the medical schools of the West and that the majority of these men are in civil life? No! No! No! He can not.

I could say a great deal more, Mr. Editor, that cannot be disputed; but I fear I have already encroached a good bit on your space and must wind up by suggesting that if a Royal Commission be appointed for the re-organising of the Services, the evidence collected should be from every available source, civil and military, and not a one-sided farce, as are most of the Commissions, so far held.

My card herewith sir, to show that I am not afraid to stand by my guns, which are charged with irrefutable truths and while I have not the least objection to your divulging my name to individual enquirers I adopt a *feuille de plume* because I do not wish your 4000 odd readers to think I am trying to advertise myself as a fearless, plain-spoken and straightforward.

CIVIL MEDICAL PRACTITIONER.

CALCUTTA 6. September 1895.

DIAGNOSIS AND TREATMENT WANTED.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I shall be highly obliged if any one of your many readers can kindly inform me through the medium of your paper of the name and treatment of this disease, the symptoms of which I quote below. This will not only put me under obligation, but will mitigate the sufferings of many poor souls.

A peculiar oedematous swelling of both the feet first begins with some pustular or vesicular eruptions, which then burst, coalesce and excrete copious serous fluid. The swelling attains a large size, and the sufferers are unable to walk.

The vesicles and pustules turn into very painful, extensive patches but do not itch. Both the dorsal and plantar sides are affected. This disease is prevalent during the rainy season and among the laboring classes, affecting men and women alike, but the latter are more so. Sometimes two or three places of the swelling burst and copious fluid passing out causes agonising pain. The local name is "Phool Ki Bimar" or "Familara."

There is no doubt that some kind of parasite produces the disease, the exciting cause of which is wind and water, with which they constantly come in contact.

Damp and swampy lands are favorable places for the growth of the parasite.

We generally treat the cases, locally, with strong caustic solution. —

A. Argenti nitrate.

Sp. chas. nitrate.

M. Fl. India.

But this serves no purpose and is very slow to heal.
Please publish this letter as early as possible, as I am
in great trouble of mind.

Yours &c., BANKIM BEHARI CHATTERJEE,
In charge Kumbhir Hospital, Cachar.
CACHAR, 27th August 1895.

:O:

PROVIDENT MEDICAL FUND.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—On page 183 of the last issue of your estimable journal I saw exactly what we have been clamouring about for 3 years. I have sent you the formal notice you ask for, and I hope you will shortly be able to announce in your paper that you have had quite a rush of applicants from our department, to whose careful consideration I earnestly commend the project.

Yours faithfully,
GEO. WILSON.

JALALA, 9th September, 1895.

*The formation of a Medical Provident Fund.

:O:

THE SUBORDINATE MEDICAL DEPARTMENT.

TO THE EDITOR "INDIAN MEDICAL RECORD."

SIR,—With reference to the amalgamation of the above departments in the three Presidencies, can any of your readers inform me whether there will be only one general list for promotion for all Military Assistant Surgeons? As this arrangement would benefit only those now belonging to the Bombay Presidency, where the promotions are at present very slow, it would be very unfair to the subordinates of the other presidencies, more especially to the 3rd Class Assistant Surgeons in Bengal, who are now generally promoted to the 2nd Class within three years, whereas their compatriots in Bombay have to wait for seven and often even for ten long years.

SLAVE OF THE PESTLE.

Government Medical Gazettes.

BENGAL GOVERNMENT.

Asst.-Surgn. Nitro Gopal Mittra, in charge of Arrah Dispy., is to have additional med. charge of Shahabad, *vice* Surgn.-Lieut.-Col. W. F. Murray, on leave.

Surgn.-Lieut.-Col. W. F. Murray is allowed leave for forty-two days, from 15th Sept.

Surgn.-Lieut.-Col. G. Price, is allowed leave for one month and five days from 10th Sept.

Asst. Surgn. Krieto Charan Bose, in charge of Berhampore Dispy., to have additional med. charge of Murshidabad, *vice* Lieut. Col. G. Price, on leave.

Brig.-Surgn. Lieut.-Col. F. C. Nicholson, Civil Surgn. of Patna, is allowed leave for four months and fifteen days, from 20th May.

Mily. Asst. Surgn. C. R. W. Bancroft to act as Med. Officer Sandhead, *vice* Mily. Asst. Surgn. J. C. Gillmon, on leave.

Mily. Asst. Surgn. J. C. Gillmon is allowed leave for one month, from 24th Aug.

Surgn.-Capt. R. Bird, Asst. Surgn., Med. Coll. Hosp., to act as Professor of Anatomy, Med. Coll., Calcutta, in addition to his own duties. *Asst. Surgn.-Maj. R. H. Charles, on leave.*

PUNJAB GOVERNMENT.

Third class Hosp. Asst. Wali Muhammad Khan resumed charge of North-Western Railway at Nowshera, Peshawar Dist., on 16th Aug.

Second class Hosp. Asst. Talsi Ram reported himself to Civil Surgn. Peshawar, on 17th Aug.

Third class Hosp. Asst. Ram Rattan, Mebraj Dispy., Ferozepore Dist., is entitled to the higher rate of pay of his grade from 19th Aug.

Asst. Surgn. Mahta Devi Dial to the Mayo Hosp., Lahore, for gen. duty, 9th Aug.

Second class Hosp. Asst. Muhammad Ismail Khan, Kartalwala Dispy., Gujrat Dist., three months' privilege leave, from 18th Aug.

Third class Hosp. Asst. Khair-ud-din resumed charge of Police Hosp., Dera Ghazi Khan, on 18th Aug.

Third class Hosp. Asst. Fazal Elahi to the Oghat Border Mily. Police Hosp., Hazara Dist., on 21st April.

MADRAS GOVERNMENT.

Surgn.-Maj. John Maitland, M.D., to act as Senior Med. Offr. Genl. Hosp., Madras, *vice* Brig.-Surgn.-Lieut.-Col. W. Price, M.D., on leave.

Surgn.-Maj. John Smyth, M.D., to act as Surgn., Genl. Hosp. Madras, without prejudice to his own duties, during the employment of Surgn.-Maj. J. Maitland on other duty.

Native Mily. pupils to be admitted as Sub-Hosp. Assts. from 12th Aug. and promoted to the rank of 3rd grade Hosp. Assts. D. Munisawmi Mudaliyar, S. Audinarain, M. N. Somasundaram Pillai.

Surgn.-Maj. John Maitland, M.D., to act as Principal and Professor of Medicine, Med. Coll., *vice* Brig.-Surgn.-Lieut.-Col. W. Price, M.D., on leave.

Surgn.-Maj. John Smyth, M.D., to act as Professor of Surg. and Clinical Surgery, *vice* Surgn.-Maj. J. Maitland, M.D., on other duty.

BOMBAY GOVERNMENT.

The following 3rd class Hosp. Assts. are transferred from 9th Aug.—Bhimaji Krishna to Dharwar: David Joseph to Yerrowda Central Prison.

Third class Hosp. Asst. Kassinath Hari Modak, genl. duty, sick leave for one month from 1st Aug.

Second year mily. pupil Alfred Andrew Lowe, Grant Med. Coll., leave for one month from 27th July.

CENTRAL PROVINCES GOVERNMENT.

Third class Civil Hosp. Asst. Suraj Parshad Tiwari, Nagpur, to do duty under Civil Surgn., Bilaspur.

Third class Civil Hosp. Asst. Yado Rao, Mandla. tempy. to Dindori Branch Dispy., Mandla Dist.

First class Civil Hosp. Asst. Deen Mahomed, Dindori Branch Dispy., Mandla Dist., is tempy. to Jail and police Hosp., Mandla.

First class Civil Hosp. Asst. Ramcharu Lal, Main. Dispy., Mandla, held tempy. med. charge of the Jail and Police Hosp. Mandla, 25th Aug.

Third class Civil Hosp. Asst. Kazi Fak the Allapilly Dispensary Chanda District.

Hosp. Asst. Rameshrya Jaganath Dubey, attached to the Allapilly Dispy., Chanda District, to do duty under Civil Surgn., Chanda.

N.-W. P. AND OUDH GOVERNMENT.

Surgn.-Capt. J. Morwood, Civil Surgn. Basti, 2½ months' priv. leave from 20th Aug.

Surgn.-Lieut.-Col. A. J. Willocks, Civil Surgn., Agra, priv. leave for three months from 15th Sept.

Surgn.-Maj. J. Anderson, Civil Surgn. Bareilly, priv. leave for one month from 1st Sept.

Surgn.-Capt. G. H. Baker, Civil Surgn., Banda, priv. leave for two months, 3rd Sept.

Asst. Surgn. Sheoraj Misra, leave (*m. c.*) for six months from 13th April.

Asst. Surgn. Gobind Narayan Das, in charge Srinagar Dispy., Garhwal, priv. leave for one month from 14th Aug.

Asst. Surgn. Ikhtidar-ud-din, Haridol, leave (*m. c.*) for two months from 25th July.

Asst. Surgn. Nihal Singh, Rai Bahadur Saharanpur, priv. leave for fifteen days from 20th Sept.

Asst. Surgn. Trihlita Nath Singha to hold civil med. charge of Basti, during the absence of Surgn.-Capt. J. Morwood on leave.

Surgn.-Maj. C. P. Lukis, to officiate as Civil Surgn., Agra, *vice* Surgn.-Lieut.-Col. A. J. Willocks, on leave.

Asst. Surgn. Chandra Kanta Chakrabarti, Muzaffarnagar, to hold civil med. charge of that District.

Surgn.-Maj. D. F. Barry, Civil Surgn., Gorakhpur, to visiting med. charge of Bandi Dist.

Surgn.-Lieut.-Col. J. Armstrong, Civil Surgn., Cawnpore, to hold med. charge of Unao dist., in addition to his other duties.

Asst. Surgn. Rajendra Nath De, to hold civil med. charge of the Unao dist.

Third grade Hosp. Asst. Ram Prasad Bana, Karnprayag diapy, Garhwal, to charge of Srinagar diapy.

Asst. Surgn. Shashi Bhawan Banarji, Lucknow, to charge of the Banarji Haridwar dist.

First grade Asst. Karim Baksh, Saharanpur, to hold charge of the Sadar dispensary in that dist.

Surgn.-Maj. J. F. Tuohy, Civil Surgn., from Saharanpur to Bareilly.

Surgn.-Capt. H. W. Elphick, from Muzaffarnagar to Saharanpur, and to hold visiting med. charge of the Muzaffarnagar dist.

Doctor H. A. Macleod, Officiating Civil Surgn., from Unao to Banda.

Asst. Surgn. Bishambhar Sahay, on reserve duty at Lucknow, to the charge of the Sadar diapy., Sultanpur.

Asst. Surgn. Nil Ratan Banarji, on privilege leave for 3 months from 16th August 1895.

Asst. Surgn. Saraju Kumar Mukerji, attached to the Sadar diapy., Orai, held charge of the civil medical duties of the Jalau district from 1st to 22nd June.

Honry. Surgn.-Lieut. C. T. Leopold, in civil med. charge of the Jhansi dist. to the charge of the Civil Hosp. Allahabad.

Milry. Asst. Surgn. M. Murphy, in charge of Civil Hosp. Allahabad, to the civil med. charge of the Partabgarh dist.

BURMA GOVERNMENT.

Surgn.-Maj. George Tucker Thomas, to be Surgn. Lieut.-Col.

Surgn.-Capt. Arthur Owen Evans to be Surgn.-Maj.

The Chief Commr. appts. Dumree Lal, Hosp. Asst., to be a member of the Pagan Municipal Committee, *vice* Hosp. Asst. D. Philip, transferred.

Special leave for six months, on urgent private affairs, is granted to Surgn. Lieut.-Col O. Baker, from Aug.

Surgn.-Maj. O. S. Randle, to be Civil Surgn., Rangoon, and Supdt. of the Rangoon Lunatic Asylum.

Surgn.-Capt. C. N. Bensley, to be Civil Surgn. Thayetmyo.

Mr. C. Martin to be Civil Surgn., Tongoo.

First grade Hosp. Asst. G. C. Chuckerbutty, temply. in charge of duties of Civil Surgn., Pegu.

ASSAM GOVERNMENT.

The following 3rd grade Hospital Assistants are transferred:—Srihari Mukerji, to Mokokchang Diapy, in Naga Hills Dist. from 19th Augt.

Rajendra Kisor Chakravati, Tamlu Mily. Police outpost in Naga Hills Dist., from 10th Augt.

Afzal Hussain held charge of Mokokchang Diapy. from 2nd July to 18th Augt.

Brijdaban Chandra Datta, to Henema Mily. Police outpost, from 21st July.

G. O. C. C.

Hospital Assistant Muhammad Ibrahim Khan resigns the Sab. Med. Dept.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Re. 1 for subscribers and Re. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTH.

HORROCHS.—At Rasikhot, on the 7th September, 1895, the wife of Surgn.-Capt. Horrochs, A.M.S., of a son.

BARBER.—On the 24th August, at Gulmarg, the wife of Surg.-Capt. H. B. C. Barber, I. M. S., Civil Surgeon, Sialkot, of a daughter, still born.

DEATH.

STRATTON.—On Aug. 28th, at the Nevers-square, A.W., Brig.-Surg. John Frodoctot Stratton, M.D., Aberd., Indian Medical Service (Retired), aged 44.

NOTICES TO CORRESPONDENTS.

J. K. D. (Bellkot).—Kindly read *Business Notices*. Delay in notification retards our moving the postal authorities.

Indian Medical Provident Fund.—Since closing our pages for the press, four more names have been sent in of persons willing to join the fund. We need 100 names. Let others show their interest in the matter and send us a post-card, with their name and address clearly written, expressing their desire to join the fund.

A. S. (Merta).—Thanks for your paper.

C. F. P. (Melbourne, Australia).—You will find the Government Orders, altering change of designation of Military Assistant Surgeons in the *Record*, Vol. VII, page 81. Military Assistant Surgeons are Medical Officers duly appointed and confirmed on H. M.'s Land and Sea Service. We believe the new parchment Warrant will clearly emphasise this fact.

R. P. W. (Coloba).—Ft. dosis means let one dose be made. The first item is acid phosphate not phosphoric acid, which latter would be incompatible to the prescription you refer to.

H. K. S. (Raiganj).—The Association Certificates are being engrossed, and when ready will be duly signed and forwarded to members.

R. F. S. (Bareilly).—Please read the Association Advertisement in the *Record*.

G. E. C. (Nainital).—The full text of the Indian Medical Association Rules and memorandum will be found in the back numbers of the *Record*.

E. E. D. (Lucknow).—Your query is answered in this number.

S. D. C. (Surat).—We shall be glad to receive your paper and publish the same in this journal.

M. C. B. (Dagshai).—Saunders's *Materia Medica* and *Da Costa's Surgery* with the *Manual of Prescriptions* will answer your purpose.

S. N. G. (Jalapaahar).—Your matter will receive almost immediate attention.

S. K. M. (Orai).—Kindly read the Association Advertisement in this number and forward your Subscription to Surgeon Major H. C. Hodgkins B.A.S., I.M.S., Medical College Calcutta.

I. M. (Bombay).—We would be much obliged if you would inform us of your objections.

ACKNOWLEDGMENTS.

We acknowledge receipt of the following with thanks:

Literary Contributions and Letters from:—Dr. Ernest Hart, D.C.L., London; Surgn.-Capt. B. H. Elliott, M.A., B.S., F.R.C.S., D.P.H., Madras; Roger G. S. Chew, M.D., C.M., M.S.C., Calcutta; Surgn.-Capt. Patrick Hehir, M.D., F.R.C.S., I.M.S., Hyderabad; Asst. Surgn. A. Baile, I.M.S., Southampton; Asst. Surgn. M. G. Dams, I.M.S., Malacca; Bankim Bihari Chatterjee, L.C.M.S., Ball; V. S. Bahadur Mudaliar, C.M.S.; J. K. S. Cooper Barrow, M.A., Trichinopoly; Asst. Surgn. G. White, Jalaia; and others.

ORIGINAL ARTICLES.

CEREBRO-SPINAL FEVER.^o

By SURGEON-MAJOR JAS. MOORHEAD, M.A., M.D., I.M.S.,
Civil Surgeon, Simla.

I HAVE ventured to select cerebro-spinal fever as the subject of this paper, because, in the first place, the disease so named has only been recently seen or reported in India, and because, in the second place, the disease, as seen here, differs, so far as my experience goes, in some very important features, from that as observed in other countries.

This specific and deadly fever has been known under various names: it has been described as spotted fever in America and as cerebral-typhus in Germany; it has been described also under the names of epidemic meningitis and epidemic cerebro-spinal meningitis; it has been popularly known as "the black sickness" in Dublin and as "nackensterre" or stiff neck in Germany. The name I have adopted is that which has been given by the London College of Physicians.

The history of this disease in Europe goes back for certain, for nearly one hundred years, and there is some reason to believe, ATKEN tells us, that it goes back even as far as the fourteenth century. The first well ascertained epidemic occurred at Genoa in 1805, and in the following year it appeared in the United States, and continued to prevail there for ten years. During the same time, and off and on during the past half century, it was observed in France, in Italy, in Spain, and in Denmark. In 1854, and for seven years afterwards, it raged in Sweden, where it is said to have destroyed more than 4,000 persons.

In 1860 to 1870 it shewed itself again in America, in 1863 it broke out in the Northern Provinces of Prussia, and from that time it has hardly ever ceased to shew itself in some part of the German Empire. The British Islands have hitherto enjoyed a remarkable immunity. Scotland, it is said, has never been attacked, only a few isolated epidemics have occurred in England, and though the disease has twice appeared in Ireland, once in the famine year of 1846, and again in 1867, it was seen chiefly among the inmates of a few work-houses and among the recruits of the Royal Irish Constabulary, stationed in Dublin.

Here, in India, the disease has been practically unknown, until within the last fourteen years. Chevers, in his work "Diseases of India," tells us he only met with one doubtful case, which recovered, and that neither Ewart, nor Guodere, nor Duka ever saw a single case, though the two latter had watched sedulously for this disease. Cerebro-spinal fever appears for the first time in 1881 in the returns compiled by the Sanitary Commissioner with the Government of India. Since then, up to 1892, 333 cases with 259 deaths have been shewn, as having occurred in the army and in jails. The Sanitary Report for 1893 has not yet been printed, but Surgeon-Major Lewtas, Statistical Officer, has kindly informed me, there were in all fifteen cases with ten deaths. The figures I have just given do not represent, I believe, the actual prevalence of the disease, as cases and deaths, under the head of inflam-

mation of the cerebral membranes, figure largely in the returns, during the past ten years, and I have little doubt many of the cases and deaths thus shewn would more correctly have appeared under the name of the disease I have chosen for this paper. I see, for instance, in 1886, inflammation of the cerebral membranes is reported to have caused eighteen admissions with fifteen deaths in jail, and eighteen admissions with twelve deaths in the army. European and Native; and, again, in 1887, under the same heading, appears seventeen admissions with seven deaths in the army.

Cerebro-spinal fever in a sporadic form has been very widely distributed throughout India, none of the three presidencies having completely escaped. The disease has also appeared in Burma and in the Andamans and Nicobars. The outbreaks, however, have been practically confined to Bengal and Bombay, only one case having been reported from Coimbatore, in Madras. Jails have suffered chiefly, only three cases with one death having been reported in the European, and twenty-one cases with fourteen deaths in the Native army, during the last thirteen years. The Bengal jails have suffered most, one-fifth of the total jails in the province having been attacked. The Alipore Central Jail has returned several cases and deaths every year since 1886. Of the Bombay Jail, Shikarpur has been chiefly attacked; and among the jails of the Punjab, the disease has been seen chiefly in the Central District Jail at Lahore.

How far, if at all, the civil population are affected, we have no data to judge from. The disease has no place in the returns of civil hospitals and dispensaries.

My first practical acquaintance with cerebro-spinal fever dates from 1889, when I was in charge of the Hazaribagh Jail. In that year there were two outbreaks in the jail, the first occurring in May and June (first case 18th May, last 5th June) the second in October and November (first case 8th October, last 8th November).

In each outbreak there were seven cases, six deaths occurring in the first and five in the second. I met with the disease again in 1891 and 1892, while in medical charge of the Bhagnipur Central Jail. There, however, I had only two cases, one of which recovered. I have had in all sixteen cases with twelve deaths.

I shall now try to give you the results of my observations, and shall also endeavour to contrast the disease as seen by me and described in books. I have had no opportunity of reading the reports of other Indian medical officers, except the very brief extracts that have appeared in Administrative Reports, and so am unable to say how far their experience coincides with or differs from mine.

First, as to clinical history. The disease, as a rule, sets in suddenly with symptoms like those seen in severe malarious fever, the temperature quickly rising to about 103° F., though it may run up to 105° F., as it did in one case. The course of the fever is very irregular, sometimes the morning temperature being the same as the evening: sometimes one or two degrees less; and occasionally higher. When it is prolonged over several days the temperature falls and becomes more or less remittent, the range being from about 99° F. to 102° F. A special rise

^oBeing a paper read before the Indian Medical Congress and sent to the Record for publication.

towards the last, such as is mentioned by FAOON and PYS SMITH, occurred in none of my cases.

Nervous disturbances always occur early, and soon become prominent. Pain, which may be most excruciating, is early felt, sometimes all over the body, sometimes only in the joints, but as a general rule in the head. In a small proportion of the cases, pain in the neck and back was a prominent symptom.

Delirium, accompanied in some cases by great restlessness, but not of a violent type, occurred in half or more of my cases. It began in one case in ten hours; in a second, in twelve hours; in two cases, after twenty-four hours; in a fifth case, after forty-eight hours; in a sixth, after sixty hours; in a seventh, after eighty-four hours; and in an eighth, not till the fifth day.

Coma was present in ten of the fatal cases; it was present also in one case that recovered, lasting for about sixty-two hours. This condition may supervene at a very early period; in one case it set in within three hours from the commencement of the fever. As a rule, it was preceded by delirium, and where such was the case it followed in from about twelve to forty hours from the commencement of the latter. The comatose condition persisted in almost all cases till death. Consciousness was partially regained after eight days: in one case that survived twenty-one days, and completely after five or six days; in a second case that lived thirty-one days. In the latter case, though consciousness began to return after three days, the patient was unable to speak for another six days; then for five days he continued able to speak, but again became comatose and remained in that condition for sixty hours; again consciousness returned, to be followed again after thirty-six hours by coma. Alternations of these conditions occurred almost daily for five days up to the patient's death on the 31st day of the disease. The coma in all cases, except one, was unaccompanied by stertor; deep groaning was present in one case.

Retraction of the head occurred in only three cases, and was present in one of the patients that recovered. This symptom appears to have been more frequently met with in other countries. FLINT tells us it has been observed in eighteen out of sixty cases, and English authorities describe it as still more frequent. Opisthotonos was present in no case, neither was trismus; this latter, according to FLINT, has been observed in 17 out of 60 cases. Rigidity of the rectus abdominis in a marked degree was present in one case that recovered.

Convulsions (clonic) occurred in one case that survived 31 days shortly before death, the contractions sometimes occurring in the upper extremities, sometimes in lower, and sometimes only in particular muscles.

Vomiting, which is mentioned in books as an early and very common symptom, was absent in all my cases, except two, and in these it occurred only shortly before death; pain in the stomach was very rarely specially complained of. *Uneasiness*, however, with or without puffiness, was an early symptom in five cases; constipation was present in some cases, while in two cases the bowels were relaxed.

Parotiditis, with effusion, was present in ten of the twelve fatal cases; it was present in two cases that sur-

vived only ten and twelve hours after the commencement of the attack. This complication is not mentioned either by ATKIN, by ROBERTS, by QUAIN, or by HOWARD SMITH. FLINT, of New York, mentions it, and so do FAOON and PYS SMITH, but the latter say it is dependent upon secondary pyæmia. This view, however correct it may be, generally, is not applicable to the two very early fatal cases I have just mentioned.

Lung complications were present in the five of the fatal cases and in one that survived in two of the cases there was pleuro-pneumonia, and in other three congestion or red or gray hepatization in one or both lungs. In one case that survived there was congestion of the right lung about the seventeenth day of the disease. It is worthy of notice that in no case was there the characteristic sputum of pneumonia, and that cough was not present except in one case. The respirations, however, in one case, were as many as fifty-two per minute.

Hearing was much impaired in one of the surviving cases, in which consciousness was never lost; in the same case, articulation was very difficult, and there was considerable impairment of the mental faculties for months after convalescence began. Difficulty in articulation was also noticed in one case that proved fatal.

Retention of urine were present in two cases.

Eruptions, which appear to have been common in other countries, were noticed in none of my cases; the same remark applies to eye complications.

Next, as to morbid anatomy. Morbid changes were present in the membranes of the brain and spinal cord in the lungs and pericardium. In the first mentioned, the appearances varied a good deal: the one case that survived twenty days, the vessels of the pia mater were markedly shrivelled; and in a second case, that lived thirty-one days, contraction of the same vessels was noticed. The examination in the former case was made within two hours, and in the latter within one hour after death. In six or seven of the cases there was intense congestion of the membranes, the veins at least in one case being filled with partially coagulated blood. In the two cases that survived over twenty days, the sinuses at the base of the brain were practically empty; in all the other cases examined, some of the petrosal sinuses contained partially or completely decolorized coagula. A fibrinous clot, 8 inches long, was, in one case, drawn out of the right interior petrosal sinus. An exudation, varying in character and extent, was present in all the cases examined, except two: in one case, that died after twelve hours, it was clear and gumlike; in another, that lived twenty-one days, it was starchy in color; while in all the others, it was distinctly yellow; in a few cases being purulent or semi-purulent. The extent of the exudation varied much: in the case that survived thirty-one days, there was only a trace of lymph over the pons varolii, and inferior perforated spot also between the posterior surface of the medulla oblongata and the cerebellum. There were, however, several points of purulent infiltration on the convex portion of the right hemisphere, close to the longitudinal fissure, one smaller point on left hemisphere, and about fifteen drops of actual pus in each posterior horn of the lateral ventricles; in another case that lived only

ten hours; the exudation was present in two or three of the sulci of the convex portion of the right hemisphere, and in one or two of the left in a similar position. In these situations it was very distinct and of a yellow color. As a rule, the exudation was present along the base of the brain, continuously from the medulla oblongata to the optic commissure; in one case it reached to a point anterior to it; and in a second it surrounded the pituitary body; it was present also in several of the sulci of convex portions of the brain and sometimes over the floor of the fourth ventricle and between the holes of the cerebellum. The brain itself only presented numerous points on section; in one case there was no sign of softening. It is probably, however, the superficial layers of the cortex are to some extent affected in the diseased process.

The membranes of the spinal cord also varied a good deal in appearance: in the case that lived thirty-one days there was neither congestion nor exudation; in three cases there was congestion only; while in six or seven cases the cord was partially or completely surrounded by a more or less distinct layer of lymph exudation. The exudation in all cases was yellow, except one, in which it was clear and gumlike, that formed in the membranes of the brain. In one case the exudation was continued over the cauda equina. In one case about 2oz. of puriform fluid escaped, on section of the membranes in the cervical region, and similar fluid was formed in the lumbar region of the same case; in another case there was a quantity of actual pus in the lumbar region. The spinal cord itself was not noticed as softened.

The condition of the lungs varied also in the two cases that survived over twenty days, both were intensely anæmic, in fact almost bloodless: in five cases no unusual appearances were noticed, while in the remaining five fatal cases, very distinct morbid changes were present. In one, that of a man who died in four days, the whole of the right lung was hepatized, the upper lobe being in a state of grey hepatization, and the whole of the left lung was greatly congested, though no part was solidified. In a second case, both lungs were congested, the right being adherent to the chest wall by recent lymph, a small portion of the lower lobe of the same lung being in a state of red hepatization. In a third case, the left lung was adherent to the chest wall almost throughout by a very thick layer of, recent, yellow lymph, a portion of the lower lobe of the same lung being in a state of red hepatization, the right lung was congested and the right pleural cavity contained about 5oz. of serous fluid; in a fourth case, part of the right lung and the whole of the left was congested, and portions of the latter hepatized. In the fifth case, the left lung only was congested.

The pericardium in ten out of the twelve fatal cases, contained more or less serous fluid, with or without congestion of its lining membrane. There was, on an average a little over 2oz.; even in the two cases that survived ten and twelve hours, quite 2oz. or more were present.

Both ventricles of the heart contained, in one case large fibrinous clots, and in another non-fibrinous clots were present. In addition to the morbid changes already described, I may add that the liver was noted as enlarged in four cases, its weight in one case being 3lbs. and in

another 3lbs. 19s. The spleen were also enlarged in four cases, but the condition existed in one, if not two of the prisoners before being attacked.

The diagnosis of cerebro-spinal fever, at the commencement of an outbreak, is sometimes by no means easy. LAYREN tells us that an outbreak of typhoid fever among the German troops, before Paris, in 1870, was at first mistaken for cerebro-spinal fever, owing to the presence, in a series of cases, of marked rigidity of the neck, severe headache, hyperæsthesia, low temperature and constipation, but that the autopsies demonstrated the real nature of the disease. Here, in India, the only disease for which it is likely to be mistaken is a severe malarious resultant; and, I think, it must be admitted that a positive diagnosis from that disease is hardly possible, till a post-mortem examination has been made. The excruciating headache and backache, the irregularity of the temperature, the early setting in of delirium followed by coma, and the rapidly fatal character of the disease are the points that may be most relied upon.

The prognosis in India is very unfavorable; there were 15 deaths out of 17 cases in jails in 1892 and 29 deaths out of 35 cases in 1891; in the latter year, there were eleven cases in the Alipore Central Jail, all of which proved fatal. The mortality in my cases was somewhat less, being only 75 per cent. In Europe the general prognosis is less unfavorable, the mean mortality being only about 40 per cent. though in some epidemics, as four-fifths of those attacked have died. The range of temperatures assists a little in forming a prognosis; in my most rapidly fatal case 102·6° F. was the highest temperature recorded.

The early setting in of coma is an unfavorable symptom, but one of my cases that recovered remained unconscious for over 60 hours. Convalescence may be very protracted: one of my cases remained in hospital for six and a half months; in that case there was loss of hearing with headache for weeks, and the mental faculties remained impaired for months.

The pathology of the disease appears to be fairly well established, if we accept the authority of STRENNER, NETTER, WEICHENBAUM, and others, according to whom has been demonstrated the presence of the diplococcus pneumonia, and other micro-organisms in the meningeal exudation, and he assumes, therefore, there is little doubt that the meningeal inflammation is due to the presence of those organisms.

The etiology of the disease is still a mystery. That a specific poison exists, the prevalence of the disease as an epidemic implies; but as to the nature and source of the poison, as to the condition under which it is generated and diffused, we have as yet no positive knowledge. The disease has its favorite habitat in prisons and barracks; it appears to attack males more than females; it attacks persons in all conditions and at all periods of life, though its favorite victims appear to be robust males, between the ages of fifteen and thirty; it prevails generally in the cold season; it does not appear to be either infectious or contagious, or to be much influenced by general sanitary conditions. The outbreaks in the Alipore Central Jail were ascribed by the committee, which investigated the disease in 1891 to overcrowding and defective ventilation, but though

The recommendations of the committee were carried out, outbreaks of the disease have occurred every year since, and there has been an increase rather than a decrease in mortality from that cause. The sanitary condition of the Hazaribagh Jail, in which my first cases occurred, differed so far, as I know, in no respect before, during, or in the interval between the outbreaks. There was not even an approach to overcrowding, the capacity of the four wards, in which cases occurred, being few in excess of the numbers actually locked up. The site of the jail is good, being on a plateau, 2,000 feet above sea level, and there are no defects in ventilation. The general health had been remarkably good from the beginning of the year up to the end of April, and we had no death for over seven months out of a daily average population of 188.

Treatment is most unsatisfactory, and that this is so is, I think, not surprising when the nature and extent of the disease are considered. Treatment must be mainly symptomatic, and various drugs have been tried—opium, quinine, bromide, iodides, belladonna, chloral hydrate, mercury and others—but with very scanty success. Blood-letting was largely practised in former days, and is again being resorted to in Germany. ZIEMSEN and others strongly recommend the use of ice bags to the head, neck and back for weeks together, if necessary, and extensive vesication of the head, neck and back has been tried. My patients, as a rule, were treated in a darkened ward, separate from others, most of the medicines above-mentioned were given, and others besides. The diet consisted of milk, sago and soup, generally given by the mouth, and in a few cases by the rectum. The clothing of the sick was constantly changed, personal cleanliness attended to, and thorough disinfection of the wards carried out.

When I wrote the paper I despatched some days ago I had not the report of my Bhagalpur cases before me. There was great delay in sending me those reports, and I wrote the paper without them. The reports have reached me to-day, and I think some of the features of the two cases were so peculiar that I should bring them to the notice of this Congress.

The case that recovered presented the following peculiar features:—

1. There were marked contractions of the left arm and leg and to some extent of the left rectus abdominis on the second day of the disease. The contractions gradually disappeared, that of the leg before that of the arm.

2. The temperature on the second day fell to 95.5° F. in the rectum and 95.4° F. in axilla; temperature taken very carefully by myself, as I doubted the accuracy of that taken by the Hospital Assistant.

3. Pulse on second day fell to 40.

4. Respiration on second day fell to 12 per minute.

5. Suppression of the urine almost complete for 36 hours.

The patient remained in hospital from 26th December 1891 to 27th January 1892.

The patient that died was admitted to hospital about noon on the 6th November 1892, with high fever. I saw him at the time of admission. He made no complaint specially of pains anywhere. Soon after admission he vomited two or three times and became unconscious about

4 P.M.; same day about 7-30 P.M. both hands and arms became contracted, and he was unable to swallow and continued unconscious. The next morning (7th) I found paralysis of motion complete and of sensation nearly as of right leg; left leg normal, dilatation to some extent of both pupils, which, however, were sensitive to light, lockjaw, contraction of both forearms on arms, fingers normal. The patient could be roused somewhat to consciousness, and he was able to swallow and sometimes to open his mouth just a little. With his left hands he continued, as a rule, to grasp his penis, and when the hand was taken away, it returned to the penis. The temperature in his right hock was 97.6° F., left hock 98.3° F., axilla 99.6° F. (temperature taken by myself), pulse 104, respiration 20. At 3-30 P.M. same day temperature rose to 103.2°. Next morning (8th) temperature down again to 99.6°, contraction of elbow joint diminished, sensation returned to right leg, and there was only partial paralysis of motion, hearing fair, jaws still fixed, but patient could swallow; pulse 100, respirations 20.

Temperature at 4 P.M. 101.8°. Condition otherwise improved; patient able to speak and to drink easily; contractions of elbow joints gone.

9th December. — Morning temperature 102.4°, pulse 112, complained of pain over heart, but no signs of pericarditis, right leg still partially paralysed, tongue very much furrowed.

From 10th to 21st December, when patient died on 16th day of the disease, temperature irregular, ranging from 98.8° F. to 103.2° F.

On 12th December he had difficulty in articulation: pupils noted as normal on that date.

On 13th December he had severe abdominal pain.

On 19th December vomiting of black blood and mucus: hiccup in the evening, gone next morning to return again in the evening.

There was no retraction of the head and no opisthotonos and no eruption; much complaint at one time of pain in spine between the scapulae.

Post-mortem examination showed following marked appearances:—

A layer of yellow lymph along base of brain from medulla oblongata to a point a little in front of optic commissure.

A line of lymph along the anterior and inferior borders of lateral lobes of cerebellum.

A layer of lymph on posterior aspect of cerebellum close to fissure.

A point of purulent infiltration, $\frac{3}{4}$ inch long $\frac{3}{4}$ inch broad, filling up sulcus on frontal lobe, close to longitudinal fissure and two inches behind anterior border. Distension of both lateral ventricles, of one especially with somewhat purulent fluid. Cerebro-spinal fluid in excess.

Brain itself apparently healthy; spinal cord in upper cervical region completely surrounded by a layer of yellow lymph; posterior aspect of cord right down to corda-equina covered with lymph; considerable quantity of serous fluid in lumbar region.

No pericardial effusion, no disease of lungs.

THE MACRO-PATHOLOGY OF CONSTITUTIONAL MALARIA WITH SPECIAL REFERENCE TO ITS TREATMENT BY ALKALINE SALINE MINERAL WATERS.*

BY, SURGN.-MAJOR L. T. YOUNG, M.D., I.M.S.,
Civil Surgeon, Umballa.

ENGLISH text-books of medicine are uniformly unkindly cart, unsatisfying and often misleading on the subject of the constitutional effects of malaria.

These books form either in the original, or as translations, the universal guides to a systematic knowledge of malaria for Indian medical students.

The present appears to me a fitting opportunity for collating, comparing and crystallising out the crude impressions we have one and all acquired in the course of our practice or study in this country.

If this representative meeting gives expression to its impressions of the constitutional effects of malaria and the methods of averting or removing them, it might possibly lead to clearer and more precise accounts of this subject finding their way into both English and American text-books of medicine. The French, Italians and Austrians have a knowledge of malaria far superior to ours.

The subject is an important one, both to ourselves and to the State. To ourselves, because we are all certain sooner or later to suffer more or less from malaria; to the State, because fever alone causes more death and invaliding than cholera, small-pox, dysentery, &c., do collectively.

I venture to lay before you the following generalisations and facts, and invite you to suggest others and to discuss and reject any which seem to you inaccurate or incomplete.

At the same time, I would remind you that malaria differs in its effects in the different climates of this vast empire, and that different observers have had diverse opportunities of noting clinical and pathological facts, or may have utilised these opportunities differently. My experience and conclusions have been drawn from the dry Punjab, alternately very hot and very cold as the seasons change. The first point to which I would direct attention is that—

The treatment of malarial fever should be divided into two stages—

(a) *Curing the attack* by temporarily killing the malarial organism; and

(b) *Removing the condition of the abdominal organs and mucous membranes induced by it.*

This latter is often the more important of the two, and enables the *vis medicatrix naturæ* to throw off the disease better than anti-malarial remedies would enable us to do.

Before discussing the use of alkaline salines in the treatment of malaria, it will be necessary to very briefly consider the pathological conditions produced by malaria and their functional effects.

Even a rather casual inspection of numerous autopsies will, I think, lead to the adoption of the opinion that malaria congests the internal abdominal organs and causes catarrh of the mucous membranes.

A proper recognition of these two facts and their results may be considered the key to the successful treatment of the constitutional effects of malaria.

A.—Malaria congests the internal organs—

(1). *Liver.*—Is it not rare, at an Indian autopsy, to find a liver free from congestion of some form or other? In many the appearances are distinctly those of incipient "nutmeg" congestion, whilst in advanced malarial cases there is distinct cirrhosis of a hypertrophic kind—following to some extent as the result of long-standing congestion, according to the well-known pathological law.

This cirrhosis is not the ordinary "hob-nailed," contracted-surface form, but the enlarged, hypertrophic morocco-leather surfaced, which commences in and around the bile ducts, and which, I venture to suggest, begins as a catarrh of these channels in a manner similar to that in which catarrhal malarial enteritis supervenes on tropical intestinal catarrh.

Tropical hepatic congestion is always associated with more or less fatty infiltration of the liver cells.

Results.—The acute result comprise hepatitis, abscess, perihepatitis, dysentery, catarrh of the ducts, &c. The chronic embrace the various forms of imperfect proteid metabolism or liver indigestion, also gout, rheumatism and possibly diabetes, &c.

(2). *Spleen.*—The early congested and the late cirrhotic stages are only too well known.

Results.—The organ or its capsule sometimes inflamed; the enlargement of the organ may reach an enormous size sufficient to fill the entire abdomen, almost. In the later stages ascites supervenes, anemia and debility with a tendency to sudden death from pulmonary thrombosis as so ably described by Sir JOSEPH FAYRER.

(3). *Kidneys.*—These are nearly always found congested, often intensely so. Of the later stages, the large white has been the most frequent result of my own observations, not the cirrhotic form as one would have expected.

Acute desquamative nephritis is not a rare complication of severe malarial fevers, and it often, in the slighter degrees, is overlooked, and gradually assumes the fatal chronic form.

The dietetic errors to which Anglo-Indians, as a class, are so much addicted, are also largely to blame for many cases of Bright's disease.

Two or even three large meat-meals daily, with many richly seasoned courses, mostly flavored with sauces and vinegar, both so injurious to the prevalent tropical intestinal catarrh, are, as a rule, indulged in. Consider these acted on by—(1) a weak and imperfect gastric juice secreted by a dilated stomach, the glands of which are atonic, atrophied or catarrhal; (2) the imperfect bile secreted by a chronically congested liver. Consider that even this gastric juice has been diluted out of all semblance of even its feeble original digestive activity, by copious draughts of tea or of whiskey and soda, drunk during meals.

It is little to be wondered at if persons, whose digestion is conducted under these conditions, are likely to ultimately suffer from renal mischief.

This result is further contributed to by the lives of hard work, Anglo-Indians lead out here. The idea that

* Being a paper read before the Indian Medical Congress and sent to the *Record* for publication.

India is a country of ease and plenty has long since exploded. It takes as hard, if not harder, work to succeed in life out here as it does in Europe.

Many find themselves, when sadly in need of sick leave to Europe or the hills, unable to afford it. They struggle on for a few years longer and break down or die in doing so. Few can now buoy up their sinking energies by looking forward to retiring with a competence, much less with wealth.

The conditions of existence in the tropics are yearly becoming harder, less elastic, more discouraging. This cannot fail to react upon the general health and constitution of tropical residents. My own impression of these altered conditions of life in India is that the kidneys now break down oftener than previously. Another factor in producing renal disease is the continued elimination by them of the irritating products of imperfect proteid metabolism. This latter is a common result of constitutional malaria and of cirrhosis. In an advanced case of tropical cirrhosis the ureometer shewed only 0.5 per cent. as the daily excretion of urea.

(4). Chronic liver congestion also acts mechanically in congesting the stomach, bowels, uterus, ovaries, rectum, &c. Hemorrhoids are common. These are often accompanied by a permanently moist condition of the anus with a purulent discharge from it.

The uterus is often found enlarged, softened, displaced, its ligaments relaxed and its interior endometritic. The ovaries become the seat of congestive pains, more marked during the actual attacks of fever.

This condition of the uterus is, in my opinion, a result of the extension of endometritis to the parenchyma of the organ and not a direct result of malarial congestion.

B.—*Malaria causes catarrh of the mucous membranes.*

Tropical residence, from the extreme and rapid differences of temperature to which we are subject, and from the excessive humidity of the air during the rainy season, &c., also contributes to the same result.

All the mucous membranes of the body become sooner or later affected by catarrh from the above causes. Pharyngeal and laryngeal catarrhs are generally the earliest to occur. The latter spreads with great frequency up the Eustachian tube, giving rise to otitis media, which often goes on to suppuration with loss of the membrana tympani and ossicles or to plastic inflammation sealing up the ossicles into the fenestra and so causing deafness.

The Schneiderian membrane shares the same fate, and hyperplasia of it over the turbinated bones is a common result. Slight chronic ophthalmia attacks the conjunctivæ. The lining of the uterus becomes endometritic.

The most important catarrh, however, is that of the stomach and intestines.

Under the influence of repeated "long drinks," large meals and hot weather the stomach becomes dilated. Its glandular structures degenerate and atrophy leading to the secretion of a gastric juice imperfect in quality. You may perhaps have observed that an ague patient, who has had a drink of milk half an hour previously, brings it up perfectly uncoagulated, showing the complete absence of acid from his stomach. The thickly loaded, large,

flabby, indented "tropical tongue" is a frequent sign of tropical gastric catarrh.

The intestinal catarrh often causes not alone obstructive jaundice, but ramifies and extends along the bile passages in its more chronic forms. This, as I have already suggested, may act as the starting point of biliary cirrhosis.

Catarrhal enteritis is a common and extremely fatal consequence of extension of intestinal catarrh to the substance of the intestine from its mucous membrane, and its occurrence is favored by the mechanical obstruction to the return of blood from the chylipoietic viscera, by a chronically congested liver. This enteritis is not an æsthenic form of inflammation accompanied by the exudation of lymph, nor does it usually excite the overlying peritoneum to effusive inflammation.

The bowel usually found pale, thinned and anæmic from malarial atrophy, is, when enteritic, found darkly congested, thickened and its mucous membrane soft, and vividly injected. The peritoneal side of the bowel is also red and injected. Long tracts of the bowel are not affected in this intense manner, but only patches of a foot or two. The spaces between these present all the signs of chronic congestion or of incipient inflammation with signs of vascular dilatation and blood stasis. The congestion is usually most marked about the ileum. There is no trace of any ulceration of Peyer's patches or of the mucous membrane. A case which recently died at the Umballa Hospital of this affection had grass-green motions, just like a child with irritative diarrhoea. The colour of the diarrhoea is mostly either pale or dark. I have not often seen it green in adults.

The general condition of the abdominal organs of a malarial patient resembles to some extent that of an animal which has had its splanchnics cut. In both cases the abdominal viscera became surcharged with blood. After splanchnic section however the congestion is active, and there may be a paralytic secretion of digestive juices. Electric stimulation of the splanchnic area and tight bandaging of the abdomen temporarily correct this condition, when experimentally induced, the former by contracting the arterioles and the latter by mechanically preventing passive congestion.

The adoption of electrical stimulation and tight bandaging of the abdominal organs are found clinically to be very effectual, even though the congestion differs in this case in being partly passive, partly mechanical and venous, and in being accompanied by an atonic lack of secretion instead of by a paralytic flow.

Hot salt baths of a temperature of from about 104°F. of half an hour's duration are also useful in remedying this condition, by withdrawing the blood to the skin, and so giving the internal organs a temporary respite.

Already I have alluded to the occurrence of *thinning and wasting of the small intestines* under the influence of constitutional malaria. This is often accompanied by patchy pigmentary degeneration of the intestinal mucous membrane. The coats of the gut become in advanced cases as thin as a sheet of paper.

Malarial degeneration or atrophy of the heart also occurs in advanced cases. This organ is found pale, thin, small and flabby. The ventricular walls are reduced to about half their normal thickness. The muscular tissue is atrophied and fatty degenerated. Such patients

have a poor circulation; they feel cold greatly, are subject to headaches, giddiness, loss of memory, noises in the ears, nausea, faintness, and dyspnoea. They have a feeble hold on life. I have seen two of them die from an ordinary dose of Epsom salts, and many die from exposure to cold.

Malarial Paralysis.—Severe and long-continued malarial fevers often produce paresis, or paralysis motor or sensory, of both of the lower limbs. This was found to be due to *spinal pachymeningitis*, in one case in which an autopsy was obtained: there was no history or signs of previous syphilis in the case. In the last two months I have seen twelve cases of paralysis of the lower limbs due to malarial fever. In one case compression myelitis had occurred; there was complete loss of control over the sphincters with complete motor and sensory paralysis of the lower limbs. The patient, a girl of 13, sank and died of exhaustion and bedsores.

C.—We next come to the question of *how the above conditions may be ameliorated, removed or prevented by alkaline saline mineral waters.*

Of these the chief are those of Neuenahr, Carlsbad and Marienbad. The first is very mild and is suitable for the weakest and most debilitated cases. The last, Marienbad, is the strongest and is suitable for powerful robust cases only. Carlsbad occupies an intermediate position, and is, on the whole, the most generally suitable of all three.

The composition of all three is practically similar, but their strengths differ as indicated above. The composition of Carlsbad water here given will serve to give a sufficiently definite idea of their nature.

The Carlsbad water contains in every pint 53 grains of solids. These solids are mixture of the sulphate, carbonate and chloride of sodium. It also contains from 12 to 20 cubic inches per pint of carbon dioxide gas. When evaporated to dryness a crystalline residue is obtained, which, from its containing 55 per cent. of water of crystallisation, deliquesces in the tropics and is generally inconvenient and unmanageable.

This salt however, by an ingenious process of dehydration and recarbonation, is converted into a very stable and non-deliquescent, though hygroscopic, compound, exported as the "*powdery Carlsbad Salt.*" In this form it is the most convenient and least expensive for use in the tropics.

The *pulverised or powdery Carlsbad Salt* (pulver-forming) consists of:—

| | | | |
|---------------------|-----|-----|--------|
| Sodic sulphate | ... | ... | 43.25 |
| Sodic bicarbonate | ... | ... | 36.39 |
| Sodic chloride | ... | ... | 16.81 |
| Potassic sulphate | ... | ... | 3.06 |
| Lithium bicarbonate | ... | ... | 0.39 |
| Traces of others | ... | ... | 0.20 |
| Total | ... | ... | 100.00 |

An artificial water made with this salt merely differs from the natural water in having its carbon dioxide gas in a state of combination, whilst in the natural water it is present in the free state. This slight defect can be remedied by adding a little soda water to the water in which you dissolve the salt.

The above analyses show that the main constituents of Carlsbad water are sodic sulphate, sodic carbonate

and sodic chloride—a combination of sodium compounds. Even the aphorism of the older physicians—"ammonia for the lungs, potash for the kidneys, and soda for the liver"—shows us that we must expect the main action of this combination to be on the liver.

I shall nevertheless briefly review the therapeutic actions of these salts and point out their physiological uses.

1. *Sodic sulphate* ($\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$) is a saline hydrogogue cathartic or purgative, which has a special action on the liver, stimulating it to increased action. It stimulates the coats of the stomach and intestines to pour out a thin watery secretion which may amount to diarrhoea when the doses are large. It thus carries away water from the blood vessels of the chylipoietic viscera, and relieves congestions of the liver and spleen by depleting the portal system indirectly. Magnesium sulphate acts in a similar way, but is devoid of the special action on the liver that sodic sulphate has. Strong solutions of both these salts precipitate the globulin derivatives of blood and favor the coagulation of that fluid, so that it is extremely unlikely that either of them, in a mineral water, can have any effect in causing absorption of fibrinous exudations. BRAUN states that the effect of this salt on the intestines is mainly irritative, and that it is little absorbed. It decomposes in the alimentary canal, in part into sulphuretted hydrogen, which acting on the small quantities of iron present in the Carlsbad water is said to blacken the feces, and into sodic sulphide.

2. *Sodic carbonate* ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) in the dilute form in which it exists in Carlsbad water is a diuretic and mild antacid. It emulsifies fats. On the presence, in it, of soda depends the alkalinity and fluidity of the blood. It exercises a solvent action on the albumen, fibrin and fibrin-factors of that fluid. A strong supposition exists that this solvent action of soda on fibrin is the normal method of change of substance (proteid) (BRAUN). Clinical experience shows that long-continued administration of this salt depresses, thins and weakens the patient. Excess of soda leads to excessive tissue and other changes. It can dissolve recent inflammatory fibrinous exudations. It is the principal salt in the pancreatic juice of man, and that on which its alkalinity depends. It is the alkali and chief inorganic constituent of bile and has a powerful solvent action on thickened bile and biliary concretions. When ingested it dissolves off old and worn-out epithelium from the mucous membranes: hence its great use in catarrhal dyspepsia. The inorganic basis of the fluid portion (serum) of the blood is soda, that of the solid portion (corpuscle) is potash. "Soda is the alkali, the presence of which is most important to the human system." Soda is the fluidifier of the blood.*

3. *Sodic chloride* (NaCl).—In large doses is an emetic, a cholagogue and hydrogogue purgative. In small doses it unquestionably supplies the stomach with material for the manufacture of gastric juice. It aids and stimulates the digestion not alone of nitrogenous but also of starchy foods. It excites rapid absorption and peristalsis. It is always present, in constant proportion, in the fluids and tissues of the human body, and

*Macpherson's Baths and Wells of Europe.

is necessary in the former for the solution of their proteid constituents, more especially of the members of the globulin family. Wherever active cell formation is proceeding, there we find abundant sodic chloride, e.g., in pus, synovia, grey hepatization of the lungs (BRAUN). In fluid exudations not accompanied by cell proliferation we also find it, as in ascitic fluid. With urea, that ultimate product of proteid metabolism, we find it associated so intimately, that many physiological chemists regard them as forming a definite chemical compound. The greater the amount of sodic chloride in the blood, the larger is the amount of urea excreted in the urine. Hence the use of this salt in cases of albuminuria, where the excretion of urea is diminished. The quantity of salt in the blood is maintained at a constant strength, any excess being eliminated in the urine. The body retains no great reserve of salt as it does of glycogen. The osmosis and endosmosis between the blood and tissues is mainly dependent on the presence of sodic chloride. Waters containing salt are therefore indicated (1) to stimulate and increase absorption and nutrition; (2) to increase and complete elimination of effete matters (i.e., proteid metabolism); hence their great use in gout in which the metabolic changes instead of being conducted as far as the formation of urea, stop short at the stage of uric acid; (3) to rouse the vital functions of the liver and stomach; hence salt is the great remedy for atonic dyspepsia (the dose to produce these effects varies from 60 grs. to 300 grs. daily in 60oz. of water); (4), in scrofulous enlargements of glands and scrofulous cachexia, generally, salt waters are unrivalled. Such patients are, however, usually sent to more purely salt springs than Carlsbad, such as Homburg, Weisbaden, Krenznach, Woodhall, &c.

Action of the Carlsbad Water. 1. General.

1. *On the alimentary canal.*—The effect on the alimentary canal may be judged of from that of a bath of the Sprudel water on the skin. This it whitens, smoothens, softens and rejuvenates, making it like that of a young child. The old intestinal epithelium is softened and gradually dissolved away, exposing a newer and healthier layer beneath. A tongue, whose owner has never seen it clean and free from thick fur for years, is found clean and red, even in the morning. The sodic sulphate produces a slight though beneficial irritation and stimulation of the mucous membrane leading to a flow of water from the tissue, and is itself little absorbed, according to BRAUN. This relieves congestion of all the abdominal viscera, more especially of the liver and spleen, reducing them in size. It increases peristalsis, and gentle purgation follows.

2. *On the liver.*—Soda being the great biliary solvent, it eliminates old and thickened bile, and clears the minute bile ducts and vessels. Congestion is relieved. The pathological results of this are: increased functional activity, leading to secretion of bile of better quality, and quantity more perfect and complete digestion of nitrogenous foods (improved proteid metabolism) and removal of the tendency to formation of increased fibrous tissue. Even early deposits of fibrous tissue are said to be removed.

3. *On the mesenteric glands and lacteals.*—Old indurations and thickenings are softened, dissolved and removed—presumably by the sodic carbonate. This permits of free movement of the lymph and chyle. We thus often find that persons remarkable for spare and lean figures, after a Carlsbad course, fill out, become well nourished and plump. The functions of absorption and elimination are improved and invigorated. As result the blood becomes purer and nutrition improves.

4. *Genito-urinary system.*—Urine is copiously evacuated, owing to the increased blood pressure caused by ingestion of the hot water. This carries away effete and harmful materials which had previously been lurking in the system. The urine voided is richer in epithelial debris, and this must be the result of a clearing of the lumen of the urinary tubules and passages. Congestive affections of the ovaries and uterus are relieved—menstruation, which was previously scanty or suppressed, making its appearance in normal amount. Recent inflammatory exudations around the womb, ovaries and peritoneum are said to be dissolved. Those disordered constitutional conditions which lead to the formation of calculi in the kidneys and bladder are removed or ameliorated. The sexual appetite is reduced. For leucorrhoea and other female complaints the injection of the hot Sprudel or artificial water after Emmet's method, produces the best result.

5. *The circulatory system* is stimulated by the warm water, but later on the power of the heart is slightly lowered by the depressing effect of the free alkali. This leads to slight giddiness, nausea, noises in the ears, faintness, slight loss of memory, drowsiness and the usual symptoms of a diminished supply of blood to the brain. The falling off in the heart's power may possibly also be due in part to the diminution in the peripheral resistance caused by the action of the waters in freeing out the portal circulation.

6. *The respiratory system.*—Breathing is always relieved by a diminution of portal congestion and removal of abdominal fat. It is slightly accelerated by drinking the hot water.

7. *Tegumentary system.*—As a result of impaired nutrition, the skin of malarial cases is often hard and dry, and the hair falls out. Carlsbad causes increased action of the skin by the action both of the water and baths—it grows soft and moist, and hair begins to grow again. Irritative skin diseases, such as eczema, are soothed and disappear. Scleroderma is also benefited.

8. *Nervous system.*—The alkali soothes the nervous system, calming it and diminishing reflex action. Neuralgias, being the "prayer of a nerve for healthy blood" as ROMBERG asserts, are often much relieved or cured by the blood purifying effect of the water. After the course is concluded, the operations of the intellect are rendered clearer and quicker owing to the blood having been freed from the stupefying and yet irritating products of imperfect digestion, previously circulating in it.

To concisely sum up: All the organs of the body concerned in the digestion of food, in the elimination of waste products and in the purification of the blood, are brought into a healthy state and do their work more efficiently, congestions are removed, and the results of recent inflammations dissipated.

Method of administering the water.—This description will be confined to the method of using the Carlsbad water.

Patients must be prepared to devote two hours, each morning, to drinking the water in the proper manner. On getting up in the morning a dose of $6\frac{1}{2}$ ounces of the natural or artificial water made from the salts and warmed to a temperature of 120°F . should be slowly sipped as it cools down.

After this a walk of twenty minutes in the open air is taken, and then another $6\frac{1}{2}$ ounce dose; a second walk of twenty minutes, and a third similar dose are next indulged in. This is followed by a walk of one hour, after which the patient can have a simple breakfast consisting of 3 (Indian) eggs, soft boiled, about six ounces of dry toast and a cup of tea or cocoa.

A lunch of plain roast or boiled meat, a simple pudding or stewed fruit, may be given at 1 or 2 P.M.

A cup of afternoon tea at 5 P.M.

Dinner at 8 P.M. of fish, eggs, light pudding or stewed fruit. If the patient does not suffer from the headaches neuralgia, melancholy and ill-temper of imperfect proteid, metabolism, and if his liver is not enlarged, he might be allowed meat at dinner also. This course at Carlsbad or in Europe is kept up for at least twenty-one days. In India I have found it best to continue it eleven days at first, then stop it for from four to seven days, and again resume for ten days. It can be given in the hills all the year round, in the plains in the cold season.

The benefit derived from such a course is not experienced at once, but is manifested a month or two later by a vastly improved state of general health, vigour, and digestion. Patients should be informed not to expect full benefit at once.

The course should not be taken during the hot weather, in the plains, for more than four or seven days.

The course should be started with water not heated above 80°F . *The colder the water the more aperient is its action.* It is desirable that its action should be aperient more specially at the start. The object to be aimed at should be to regulate the dose and temperature of the water so as to produce one liquid motion daily, otherwise deleterious matters are re-absorbed into the system and give rise to headaches, pimples, &c., &c. *The hotter the water the greater its effect upon the blood and constitution.*

Some patients are given an extra dose of the water at 11 A.M. and another on going to bed at night. This latter has a great effect in cleaning the thickly furred "tropical tongue."

Diet.—During the course, the amount of food taken is limited.

The following articles of diet are strictly excluded :—

Fresh fruit, salads, acids, cheese, tinned, dried or smoked fish, butter. Sweets, greasy dishes and strong wines or short drinks are also to be avoided.

Contra-indications to the use of alkaline saline mineral waters :—

The presence of any of the following may be considered as contra-indicating the use of these waters :—

1. Valvular disease of the heart.
2. Degenerative affections of the great blood vessels, e.g., atheroma.

3. Advanced malarial degeneration of the heart.
4. Advanced Bright's disease.
5. Any disease of the brain, spinal cord or nervous system (chorea excepted).
6. Malignant tumours and degenerations.
7. Advanced syphilitic disease. A slight attack of syphilis, from which the patient has recovered, does not prohibit a subsequent course of Carlsbad.

Atony of the stomach is likely to be produced if the water is given too hot, for too long a period, or to very debilitated subjects. The signs of its onset are a failure of the good appetite, which patients, taking Carlsbad properly, always develop, and heart-burn. The remedy for it is to stop the water for a few days and to give a teaspoonful of Homburg salts dissolved in a bottle of soda water every morning instead. When a Carlsbad patient's appetite fails, look out for some complication, such as atony or congestions. The latter are sometimes the result of taking the water too hot.

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THE POSSIBLE ANTAGONISM BETWEEN MALARIA AND PHTHISIS

By ARDESHIR DOSSABHOY COOPER, M.B.C.S., L.R.C.P., D.P.H.

Bombay.

MY object in bringing this subject to notice is to give rise to a discussion on a very important point, and to have, if possible, a definite pronouncement of views about it. The discussion and the elucidation of the question are malaria and phthisis antagonistic? Are both of scientific and practical importance for obvious reasons? My contribution to it is merely mechanical in recording and laying before you the opinions of others. I have nothing, either from personal experience or scientific investigation, to add to your deliberations where I have come more to learn than to speak. There is much need for the above question to be answered and for attempts to be made to investigate and determine the relationship existing between the two. The matter has received at our hands less attention than its importance deserves, and the determining of the fact, if it be a fact, cannot fail to be of practical value. The subject is full of difficulties, and numerous factors of climate, food and racial peculiarities, &c., have to be taken into consideration before a solution can be arrived at, for which purpose no sufficient data are available. However, I trust an attempt may here be made which will, in some future time, bear fruit.

As late as 1811, it was put forth by WELLS that malaria and phthisis were opposed to each other, and he cited many authorities in support of his views. In 1841 HARRISON of Horncastle remarked on and drew the attention of the profession to the infrequency of consumption in the fens. These views were revived by M. BROUQUE in 1856, who held that malaria and phthisis were opposed to each other. He formulated his views under three heads: (a) that where malarial endemic fevers are prevalent, phthisis is rare, and that the frequency of one class of cases is inversely proportionate to that of the other:

(b) that where malaria decreases phthisis increases; and (c) that phthisis is more curable in malarious regions than in others." Writing on this subject the late Dr. PEACOCK instances six cases, in which phthiisical patients under his treatment were suffering from ague, thus leading him to reject the idea of there being any material antagonism between the two maladies, but he is careful to add that "the facts do not, however, warrant the denial of the supposition altogether, and there are probably few popular ideas which have not some foundation in truth."

Dr. PETER GOWAN, formerly in the service of the King of Siam, does not believe in this supposed antagonism as he has observed ague and phthisis prevailing in the country. He also is careful to admit that "it has unquestionably been shewn to be almost, if not quite, absent from many such localities and to be less prevalent where the fever was of a bad or obstinate kind."

Phthisis is hardly ever seen in Corea, although malarial fevers, which go by the name of "Hakuchu" are common enough.

It has been observed by the great Professor VIRCHOW, that fever prevailed to a frightful extent in Silesia, where nearly every one had enlarged spleen (although the medico-legal importance of the fact does not seem to have been sufficiently realised by the inhabitants). Professor VIRCHOW hardly ever saw a case of phthisis, and he was borne out in this observation by all the medical practitioners in that country. Dr. HUNTER, late Colonial Surgeon to British Honduras, says that "phthisis does not seem to originate in any degree in the Colony, but very frequently cases of this disease are sent to our public hospital from some neighbouring state. Some instances of this affection seem to derive the greatest benefit from a stay in the Colony—all the more violent symptoms subside, strength is regained and a life, that in other countries would have been of short duration, has been prolonged, and a good old age arrived at." The capital town of the Colony is surrounded by swamps and thick jungle where fevers are frequent, although not of very severe type. In 1890, sixty-nine cases of intermittent fever, with two deaths, were treated in the hospital. This by no means represents the number of cases occurring. They must have been very numerous but not sufficiently serious for hospital treatment.

Numerous American observers, as Dr. GREEN and others, advance views supporting the antagonism. Dr. GREEN had remarked that not a single case of phthisis was to be seen in his district where paludal fevers were very common, and he observes that phthiisical patients coming to the locality were much benefited and found "relief as decided as it was permanent". He mentions an instance in which a morass near Rutland was converted into a pool when fevers were replaced by phthisis, and on the reconversion of the pool into morass intermittent fevers re-appeared.

A French author, M. JORDANET, in a book published in 1861, mentions two provinces: Yucatan and Tabasco. In Tabasco fevers are very common and phthisis rare, whereas in Yucatan it is the other way about, and the fact is so well known and appreciated that persons suffering from phthisis are ordered to Tabasco by medical advisers.

I will now take you over the experiences of Dr. R. W. FELKIN, Lecturer on the Diseases of the Tropics in the Edin-

burgh School of Medicine, in his travels through Central Africa, where he had exceptional and varied opportunities of observing the prevalence of malaria and phthisis. He seems to have come across very few cases of phthisis, and even these corresponded in a very remarkable manner with the absence of malaria. In the swampy districts of Unyoro and Uganda he met with but few cases of phthisis. The same is his experience in his journey from Khartoum to the Albert Lake along the Valley of the Nile. However, while returning, he saw a large number of cases in the district of Shufi at an altitude of 8,000 to 4,000 feet, where malaria is rare. Of imported phthisis he met numerous cases in the Ghazal District, where they had come from the elevated regions of Mombutu. Again in the highlands of Gebelmarah region phthisis was observed to prevail extensively and ague was quite unknown. Dr. FELKIN mentions several cases of consumption benefited and even completely cured by a sojourn in malarious districts, although he is careful enough to take into account the element of coincidence or accident in the matter.

It will be not uninteresting to notice to a certain extent the geographical distribution of the diseases. In Siam phthisis and malaria are both common. In Corea, as already mentioned, ague is common; though the country is dry, with very few marshes and swamps, phthisis is quite unknown. In Japan, ague is rare and phthisis not very frequent. Southern provinces of China are very malarious, but it is not known whether phthisis is rare or otherwise. Paludal fevers are very rife in Burmah, and I hope some light will be thrown by medical men from the provinces as to the prevalence of phthisis. Phthisis is very infrequent in Senegal, Benguela, Angola and East Indies, malaria being common. Australia, Tasmania and New Zealand are free from paludal affection, but yield a very heavy death-rate from phthisis. Phthisis is very frequent in Nubia, Chilli and Lama, and almost unknown in Egypt, Syria, Algiers and the steppes of the Kirghiz. From these facts we cannot help feeling that neither temperature, atmospheric moisture, nor geographical position explain this. Dr. FELKIN wrote to Dr. HAVILLAND, distinguished for his researches into the geographical distribution of disease in England, for information respecting this subject, and I will venture to transcribe an abstract from his letter to Dr. FELKIN. He writes: "Lincolnshire has a low mortality from phthisis among females, and forms an exception to the general rule which at present seems hidden in obscurity. We must, however, remember that ague is prevalent in this part of England, and it is said that this disease is seldom associated with consumption. A more important coincident fact is the one that a greater portion of this land is reclaimed from the sea. It is well known that many sites, although damp with sea water, enjoy a remarkably low mortality from phthisis. Again, if you look along the once ague-districts, the North Coast of Kent, you will see the whole length of it characterised by a low mortality from phthisis among females, although much exposed to strong winds. So far then as I can see from the few instances quoted, there appears to be no marked increase of phthisis in the districts named as once characterised by ague, but it does appear that in

such localities phthisis is less prevalent than in other districts, although these may be exposed to the full force of the strong winds found to be so fatal to the consumptive elsewhere. This involves the question: Are there as many consumptives to kill in these malarious localities, and if there are not, why not?"

Racial peculiarities for these diseases would no doubt be very interesting, and could not fail to throw considerable light on the solution of this matter had we reliable and numerous data to work upon. Unfortunately we do not stand at present in a position to speak with any degree of authority or weight on the point. Besides, the racial question is so very intimately mixed up with the climatic food and social considerations, that it seems at present well nigh impossible to separate one from the other in order to determine with accuracy the part played by each. I will, however, venture to put before you the following fragments of information collected from certain portions of the United States which are now the mixing ground of various races, and where practically identical circumstances of food and climate prevail. Colored races are more liable to tuberculosis and pneumonia and less liable to malaria and yellow-fever than the white. Jews are said to have the highest vitality and the least mortality, being remarkably free from phthisis. The Irish race is peculiarly prone to tubercle of the lungs. Aboriginal Indians are being decimated by phthisis, which was quite unknown amongst them. These bits of vital statistics are given for what they are worth. They do not throw much light on the subject, and are given here to direct your attention to the discussion of the question of racial peculiarity.

You must have noticed, gentlemen, that no mention whatever has been made of India throughout this paper where both diseases are found existing. I will leave it to you to give benefit of your experience one to another from different parts of this great continent, and to determine whether malarious parts of it are absolutely or comparatively free from phthisis, and whether the malarious localities are more favorable residences for phthisical patients. The determining of these questions is beset with many difficulties, not the least important of which are imported cases of phthisis in a district which is so easy and common in these days of easy and rapid travelling. If I can venture to suggest, I should ask you for various reasons to ignore altogether the data gathered from the metropolitan cities and large towns where population is more or less fluctuating and rely mainly on statistics gathered from rural districts where the population is more stationary.

THE USE OF NARCOTICS AND STIMULANTS AND THEIR EFFECTS ON THE HUMAN CONSTITUTION.

BY RAI KANNAI LAL DEY, BAHADOOR, C.I.E., F.C.S.
Late Chemical Examiner to the Government of Bengal.
(Continued from Vol. IX., page 173.)

OPIMUM occupies an important place, and though comparatively more costly than most inebriating agents; it makes up by a very small quantity being sufficient for all purposes either of intoxication or of medicine.

Turkish Opium.

| | | | |
|------------------|-----|-----|------|
| Morphine | ... | ... | 6.3 |
| Narcotine | ... | ... | 7.7 |
| Codeine | ... | ... | 0.7 |
| Narceine | ... | ... | 9.0 |
| Mecosaine | ... | ... | 0.6 |
| Meconic acid | ... | ... | 6.1 |
| Fat | ... | ... | 2.2 |
| Caoutchouc | ... | ... | 4.5 |
| Resin | ... | ... | 2.7 |
| Gummy extractive | ... | ... | 25.8 |
| Gum | ... | ... | 1.7 |
| Mucilage | ... | ... | 18.7 |
| Water and loss | ... | ... | 14.5 |

100

Since Müller made the above analysis five other constituents have been discovered, which are thebaine, opianine, pseudo-morphine, porphyroxine and papaverine. It is the proportion of morphia existing in any variety of the drug which determines its value, and in this respect Indian opium is inferior to the Turkish, but in the markets, where it is valued, it has no competition.

As far as is known, its use is confined to three forms: solid pills, smoke or vapour, and laudanum. We owe the introduction of the last into this country to European physicians, and the use in this form is chiefly confined to medical purposes.

The *chundoo* of India is an imitation of the Chinese invention, but *gooly* is wholly Bengalee, having originated in Chandernagore, where it was first used. *Chundoo* is opium divested of impurities such as vegetable matter, resin, and oil with the extractive matter. The soft part of the opium is scooped out of the balls and thrown into an earthen dish—the operative always moistens and washes his hands in a vessel where the water is preserved. When the soft part is carefully abstracted the shells or husks are broken up and thrown into the vessel containing the water. These husks are then boiled in large shallow irons to dissolve out the opium. This boiled matter is strained through folds of China paper laid in a frame of basket work, and over the paper is placed a cloth. This strained fluid is mixed with the soft opium scooped out, and boiled, in another large iron vessel, to the consistence of thickish treacle. The refuse from the straining of the boiled husks is again boiled in water, filtered through paper, and the filtered fluid added to the mass first obtained. The dissolved opium, being reduced to the consistence of treacle, is seethed over a fire of charcoal of a strong and steady but not fierce temperature, during which time it is most carefully worked, then spread out, then worked up again and again by the workman so as to expel the water and at the same time avoid burning it. When it is brought to the proper consistency, it is divided into half a dozen lots, each of which is spread like a plaster on an early flat iron pot to the depth of from half to three quarters of an inch, and then scored in all directions to allow the heat to be applied equally to every part. One pot after another is then placed over the fire, turned rapidly round, then reversed, so as to expose the opium itself to the full heat of the red fire. This is repeated three times:—the time requisite and the proper heat are judged by the workman, from the effluvia and colour. The fired opium is dissolved in a large quantity of water and boiled in copper vessels till it is reduced to the consistence of the *chundoo* used in the shops. In the *chundoo* shops of Calcutta the drug is

smoked by the consumers in the shops themselves, where there are beds, for the smokers, the quality of which varies according to the fee, which ranges from 8 annas to 2 rupees,—a common mat being for the first and a mattress and a pillow on a charpoy are provided for the last or the highest class. It is said that beds become absolutely necessary from the fact that the smokers, fall flat either on their faces or on their backs after inhaling the smoke to their fill, and remain in a trance for hours together, after which they are roused, and both beds and their occupants require to be thoroughly washed and cleansed for the sake of decency. These shops are kept by Chinamen, and are principally resorted to by the Chinese and Mahomedans but scarcely by any Bengalees. Gooly has none of these effects, neither is so much preparation required for its indulgence. Judging from its price, it must be a mixed drug composed of all sorts of impurities which are melted and made into pills. One important ingredient which gives these pills their peculiar character and effect are chips, called *junkoo*, of guava or betel leaves and sometimes of rose petals broiled on a dry pan. For this purpose every shop is furnished with one or two portable forges and bellows. The hooka of the smoker and its pipe are in the peculiar phraseology of the votaries, called *lore* and *jore* respectively. The kulka, *maroo*, in which the pills are dressed for burning, is the stump of what is used for tobacco smoking, being merely the tubular part without the surmounting cup. The fire for burning is made by igniting short sticks of the same materials with which ticea and hooka *gools* are made. These sticks are called *batty*. The tongs with which these sticks are ignited are called *futty luty*, and the chums who meet together in the shops for the purpose of smoking address each other by the name of *i-yarro* or friend. It is indispensable that immediately after the indulgences, the smoker, should have some edible by his side to improve his taste. For this purpose he always provides himself with a cup of sherbet or some bits of sugarcane or sweets. There are many with whom even this simple arrangement is an inconvenience. For them small bits of common cork are soaked in sherbet and they suck one or two of these corks at a time. One or two pice often suffice to purchase as much gooly as is necessary for one indulgence.

Whatever his rank of life may be, a gooly-smoker, is an ugly beast, of a lean haggard appearance, with sunken eyes blackened all round, and a protuberant belly, while the bones of the whole frame seem staring you in the face. An opium-smoker may be distinguished by his black eyes, blackened lips, and thick voice.

Dr. Christison, the most impartial writer on this subject, who always condemns this and other similar drugs, says that its common effect is to remove torpor and sluggishness and to make the opium-consumer temporarily an active and conversable man. Another writer, speaking from personal experience, and comparing opium with wine, thus concludes his observations: "Wine robs a man of his self-possession, opium greatly invigorates it; wine unsettles and clouds the judgment and gives a preternatural brightness and a vivid exaltation to the concepts and admirations, the loves and hatred of the drinkers: opium, on the contrary, com-

municates serenity and equipoise to all the faculties, active or passive; and with respect to the temper and moral feelings in general, it gives simply that sort of vital warmth which is approved by the judgment and which would probably always accompany a bodily constitution of primeval or antediluvian health. To sum up, a man, who is inebriated or tending to inebriation, is and feels that he is in a condition which calls into supremacy the merely human—too often the brutal—part of his nature; but the opium-eater feels that the diviner part of nature is paramount, that is, the moral affections are in a state of cloudless serenity, and over all is the great majestic light of the intellect." Dr. Eatwell, for many years in this country, thus records his opinion:—"The question to be determined is not what are the effects of opium used in excess, but what are its effects on the moral and physical constitution of the mass of individuals who use it habitually and in moderation, either as a stimulant to maintain the frame under fatigue, or as a restorative and sedative after labor, bodily or mental. Having passed three years in China, I can affirm, thus far, that the effects of the abuse of the drug do not very frequently come under observation, and that when cases do occur, the habit is frequently found to have been induced by the presence of painful chronic disease, to escape from the sufferings of which the patient has fled to this resource. That this is not always the case, however, I am perfectly ready to admit; and there are doubtless many who indulge in the habit to a pernicious extent, led by the same morbid influences which induce men to become drunkards, in even the most civilized countries, but these do not, at all events, come before the public eye. As regards the effects of the habitual use of the drug on the mass of the people, I must affirm that no injurious results are visible. The people generally are muscular and a well framed race, the laboring portion of whom are capable of great and prolonged exertion under a fierce sun in an unhealthy climate. Their disposition is cheerful and peaceable, and quarrels and brawls are rarely heard of, even amongst the lower orders whilst in general intelligence they rank deservedly high amongst orientals. I conclude, therefore, with observing that the proofs are still wanting to show that the moderate use of opium produces more pernicious effects upon the constitution than the moderate use of spirituous liquors whilst at the same time it is certain that the consequences of the abuse of the former are less appalling in their effects upon their victims and less disastrous to society at large than the consequences of the abuse of the latter. All authorities seem to agree in maintaining that, when opium is moderately taken, the toxic results are:—the mind is exhilarated, the ideas flow more quickly, and a pleasurable or comfortable condition of the whole system is experienced, which it is difficult to describe. Again, opium is said to possess "a wonderful power of sustaining the strength, which is not found in alcoholic drinks, and of enabling men to undergo fatigue and continued exertion under which they would otherwise inevitably sink."

In the literary ranks of England, Samuel Taylor, Coleridge and De Quincey who were slaves to opium have both of them left remarkable memoirs of their impressions of the effects of opium. The latter who was

an intense pleasure of the drug thus describes the effects of his first dose of laudanum. "But I took it, and in an hour, oh heavens! what a revolution, what an upheaving from its lowest depths of the inner spirits; what an apocalypse of the world within me! That my pain had vanished was a trifle in my eyes. The negative effect was swallowed up in the immensity of those positive effects which had opened before me in the abyss of divine enjoyment thus suddenly revealed. Here was a panacea for all human woes! here was the secret of happiness about which philosophers had disputed for so many ages—at once discovered. Happiness might now be bought for a penny and carried in the waistcoat pocket, portable ecstasies might be had corked up in a pint bottle, and peace of mind could be sent down in gallons by the mail coach." Coleridge was in gloom and despondence while under the influence of the habitant thus paints his misery: "Conceive a poor miserable wretch who for many years has been attempting to beat off pain by constant recurrence to a vice that reproduces it; conceive a spirit in hell employed in tracing out for others the road to that heaven from which his crimes exclude him; in short conceive whatever is most wretched, helpless and hopeless, and you will form as tolerable a notion of any condition as it is possible for a good man to have."

Whatever might be said in praise by the admirers of the drug, my experience is not favourable as take the following picture of an opium-eater: "A total attenuation of body, withered yellow countenance, lame gait, bending of the spine, frequently to such a degree as to assume a circular form, and glossy deep sunken eyes, the digestive organs are disturbed in the highest degree; the sufferer eats scarcely anything and has hardly one evacuation a week. His mental and bodily powers are destroyed, he is impotent."

Opium is largely used in this country in cases of chronic bowel complaints, to mitigate suffering and I know one instance of the energy and liveliness which it is said to impart to the consumer. There was a clerk in a flourishing mercantile firm of this city, who was often made to taste opium, as he was a good judge of the quality of this drug of which he had a daily allowance, which he took during office hours. As long as he had it not he was sluggish, drowsy and perpetually yawning over his work; but almost immediately after swallowing his usual modicum, he would be a changed man altogether, resuming his seat and working from 12 noon to nearly an hour after candle-light, he did the work of nearly four men. He was as quick as he was accurate.

It is a common error that opium induces sleep. It brings on a state of half-dreaming drowsiness; an opium-eater scarcely knows what sound sleep is. That state of listless inactivity which opium produces should not be confounded with sleep. On one occasion, an opium-eater, while dozing on a couch at candle-light, called the servant to replenish his *chillum* with tobacco; and held out his hand for it. The *chillum* was replenished, but the outstretched hand with the hook in its grasp remained stiff and motionless; the man dozed on, the night wore out and nearly an hour after day-light he roused himself and, unconscious that his order of the previous evening had already been obeyed, and that the whole night had passed away, repeated his order for tobacco.

It is remarkable that opium-eaters of this country are inordinately fond of tobacco, which you cannot give them too often. Except that it is an aid to the effects of opium, we cannot account, by any other way, for this inscrutable relationship. Milk, it is well known, is considered as an indispensable adjunct to the opium-eater, who sustains himself by frequent potations of this beverage; and his health and vigor will be in proportion to the consumption of milk.

When once ripened, the opium habit cannot be shaken off and takes such a hold of its victim as to make a slave of him. It is not every man who can be a DeQuincey or a Coleridge; and the following confession of an opium smoker proves how difficult it is for ordinary men to break their opium fetters—"If the usual time of smoking should be put off through any excuse or difficulty, terrible spasms of the muscular system come on, so much so, that I was once lying on a couch which was shorter than my length of body, and something had delayed my morning smoke, when a spasm came on and very nearly dislocated my jaw; another caused my feet to stretch out full against the side of the couch which was broken by the stretch."

Laying aside the question of wholly shaking off the habit, the opium-eater, if deprived of the supply at the appointed hour of indulgence, feels as if he is under the pangs of death. Opium, is supposed, to be consumed by nearly four hundred billions of the human race.

A MIRROR OF PRACTICE.

STRYCHNINE INJECTION IN SNAKE-BITE.

By D. NARAYANA RAO, C.M.S.

Yamethin, Burma.

At about 7 p.m. on the 14th August 1895, a Chetty boy of 12 years of age, while crossing the threshold of his kitchen, was bitten by a snake which also coiled its tail round his leg. The boy cried for help and kicked off the snake which immediately disappeared and could not be found, though closely hunted for. On examining the foot the boy's father found blood oozing from 3 punctures on the dorsum of the right foot. The boy was borne away to a *phoongyi chawng* (a place where Burman priests reside) for treatment; but as they could do him no good, though several of them tried hard all night, he was, as a last resource, brought to the hospital at 8.55 A.M. on the 15th August 1895.—14 hours after the snake-bite.

At this time he was quite unconscious, eyes closed, pupils widely dilated, foaming at the mouth, general features of the face pinched, pulse weak and almost imperceptible, muscles of the body in general relaxed, breathing stertorous. His right foot was swollen. Slight swelling was also observed on the lower 3rd of his right leg. There were three punctures on the dorsum of the right foot (about 3 inch below the right ankle-joint).

Though I at first lost courage on seeing the hopeless case, as I had never come across a case of snake-bite nor seen one treated; but the proverb "While there is life there is hope" encouraged me and I had also read DR. AUGUSTUS MUELLER's memorials dated 6th September, 22nd December 1892 and 10th December 1894, which were

Issued to this hospital by the head of the department. I had gone through these papers more than once when I assisted a confrere writing an explanation as to the cause of death of a snake-bite case under his treatment, but that was his case, not mine.

Though I determined to try Dr. MUELLER's treatment on my case, yet doubts arose on the recollection of the fatal results of the strychnine-injection experiments by Dr. ELLIOT of the Presidency College, Madras. But as I dared not lose much time in thinking over this, I attributed Dr. ELLIOT's failures to his having tried them on lower animals, which, as Dr. MUELLER says, are very apt to be thrown into violent and fatal convulsions. Moreover, while he merely contradicted Dr. MUELLER, Dr. ELLIOT does not suggest a better remedy, so I resolved to try the strychnine injections and leave argument for some other time.

The first injection, 10 minims of the B. P. liquor strychnine, was given at 9 A.M. and repeated every 20 minutes till I gave 5 injections. Half an hour after the fifth injection the patient began to open his eyes, slowly coughed out the froth and phlegm from his mouth, body became warm, patient began to recover from his unconsciousness. I took his temperature. It was 99°F. The pupils, were contracted, yet not perceptibly, and as patient seemed much better, I discontinued the injections.

But at 11-35 A.M. there was a relapse of the signs of snake poison. So I gave six more injections at half-hour intervals till 2-30 P.M., when the patient widely opened his eyes, the pupils still dilated, the body was hot; temperature 101-4°F. muscles of the body getting firmer, consciousness very good, gave two more injections, one at 4 P.M., and the other at 6-10 P.M., half an hour after which the patient's voice returned though not quite natural. Pupils still remained dilated.

From the beginning up to the end the patient was not allowed to sleep and so on till 9 P.M., when I visited him and he desired me to allow him to sleep. His voice was quite natural then. I asked the Civil Surgeon's permission and allowed him to sleep and when I saw him next day at 5-30 A.M., he greeted me with a cheerful good morning.

He is as healthy to-day as he was before being bitten by the snake; and during the course of treatment had taken 130 minims of liquor strychnine B. P., corresponding to 1½ grain of strychnine.

I am very thankful to Dr. AUGUSTUS MUELLER and am so pleased with the results I obtained that I shall always use this drug in snake-bites, as I do quinine in malarial fevers and sulphur in itch, provided the subjects are human beings and not lower creatures.

A CASE OF RENAL COLIC, PASSING OF PHOSPHATIC SAND AND INSTANTANEOUS RELIEF, FROM EXCRUCIATING PAIN, AFTER MORPHIA INJECTION.

By JOHANNES MOTIRAM, C.M.S.

Pandya.

A FAIRLY well built adult, at 40, of sedentary habits, was suddenly taken ill with pain in the right lumbar and iliac regions, radiating downwards along the course

of right ureter. Micturition frequent, only a few drops of urine passing at a time, attended with pain, before and after each act. Bowels rather constive, though moved in the morning. Temperature normal, acid urine, and as he had similar pain about three years ago.

R. Liq. Ammon Acet. ... 3vj
Spt. Aether Nitr. ... 3jss
Pot Citras ... 3j
Tinct. Hyoscyamus ... 3jss
Mag. Sulph. ... 5jj
Aqua Camphora ... 3iv

M. Ft. Mist. † every 3rd hour with plenty of water. Fomentation to the painful part and flannel roller round the abdomen.

The pain having tempered down by 8 P.M. the following was given:—

R. Quinine Sulph. ... gr iiss.
Opium ... gr ss.
Ext. Gentian ... g. s.
Ft. pill i. Give at once.

18th.—Bowels have not moved. Temperature normal. Urine 20 ozs., sp. gr. 1015. Reaction highly acid, albumen †. Frequency of micturition continues. Painless.

Continue mixture omitting Mag. Sulph. Poultice to the part. Warm water enema. The enema returned freely, bringing with it fecal coloured fluid, but no lumps, and at 5 P.M. urine was voided in large quantity; but the pain became excruciating. Patient rolling in bed and crying so for relief, that I administered morphia hydrochloras † grain hypodermically into the lumbar region, and the pain almost instantly passed off. Had a good nap in the afternoon.

20th.—Had sound refreshing sleep for the night. Pain occasionally during micturition, but less in frequency being 5 ozs. at a time with a total of 35 ozs. with an acid reaction sp. gr. 1008, and white deposit at the bottom, dissolving in nitric acid, but imparting a gritty sensation to the fingers, on rubbing, lots of phosphates, no albumen, temperature normal.

Hereafter the progress, of the case was most satisfactory. the urine daily increasing in quantity. No pain during micturition. Urine continuing acid till the 23rd and then neutral till 27th, when the patient went for a change, rendering further examination of urine impossible. Whitish deposit continued increasing for two days and then gradually diminishing. Under microscope a number of quadrangular formed crystals with oblique truncated extremities were detected, at first very dense but lessening till 26th, when only a few crystals were detected. 20th and 21st Mixture was given every fourth hour, and from 22nd to 26th every sixth hour.

And the diet was restricted to milk, only throughout, the treatment.

26th.—R. Liqr. Strych. Hyd. ... m̄ v
Tinct. Gentian Co. ... m̄ xx
Acid Nitric Dil. ... m̄ xv
Aque ... 3i

M. Ft. Mist. to be taken thrice a day, and advised to continue for a fortnight.

I would call especial attention to:—

(1) No gravel noticed throughout, though the urine was carefully preserved.

(3) Presence of, excruciating pain, though only sand passed.

(8) Non-recurrence of pain after morphia injection, though excretion of sand continued increasing.

(4) No rise of temperature, except 99° 8' F. on the 19th, the day of intense pain.

A SUCCESSFUL CASE OF LATERAL LITHOTOMY.

By M. ARATSHUNKER, C. M. S.

Merta Dispensary.

RAMDIN, aged 4 years, was brought to this dispensary from Padu, a village some 14 miles off. As he complained of stone in the bladder of, two years' duration, a sound was passed and stone being detected he was advised rest from the 18th to 24th July, when a dose of castor oil was given him, followed by an enema the next morning.

On 25th instant he was placed in the lithotomy position, chloroform administered, the stone localised by a sound which was replaced by a median staff (No. 4) which an assistant was directed to hold well against the arch of the pubis. An incision made on the left side of perineum, about $\frac{1}{4}$ inch above the anus; was carried downwards and outwards midway between the anus and tuberosity of the ischium for about $\frac{1}{4}$ inch, then it was turned inward till the groove in the staff was felt: when the knife was removed and the left index finger, well oiled, being introduced into the wound (the nail being fixed in the groove) a probe-pointed bistoury was passed along the finger, to direct its point into the groove. The membranous portion of the urethra being opened up by depressing the edge of the knife, the finger was passed into the bladder, directing the parts as it entered, till the stone was felt. When the lithotomy forceps was guided in and the stones caught and removed, one by one. The bladder was washed out with cold water which checked the slight bleeding present, the usual dressings were applied. There were three stones of the size of a supari,³ without facets, and weighing 162, 149 and 104 grains, respectively, or a total of 415 grains.

For the next three days morning temperature remained normal and evening 101° 7' F, but after this there was no fever and quinine sulphate was given. For the first ten days the patient urinated from the wound, for the next fourteen per urethra and wound; after which, the wound healing up, micturition took place per urethra only and he was discharged cured, in exactly a month and six days after the operation.

A CASE OF OPIUM POISONING TREATED WITH PERMANGANATE OF POTASH: RECOVERY.

By L. M. CROWDHURI, L.M.S.

Officiating Civil Surgeon, Balaghat.

THE little daughter, *et.* 10 months, of one of my jail warders was brought to the Police Hospital, because she had been sucking some opium, about an hour previously. It appears that her mother bought a small lump of opium,

worth one anna, and kept it in a small tin box, out of which the baby girl got this lump and commenced sucking it, until she was seen by her mother who at once snatched what was left out of her mouth, and went to the jailor for some native medicine but was advised to go to the Police Hospital at once.

Before I saw the child, the Hospital Assistant had given her an emetic of zinc sulph, but the vomited matter consisted principally of mucus and was quite clean, though slightly smelling of opium. The girl was unconscious but could be roused by pinching. Pupils were pin-pointed and regular. On weighing the remaining quantity of opium I concluded that she must have sucked about 8 or 10 grains; so I gave her, a teaspoonful, every quarter of an hour, of a 2 grain per ounce solution of potassium permanganate; but three hours later the girl becoming quite unconscious, and probably moribund, I ordered her two coffee enemata of $\frac{1}{4}$ an ounce of prepared coffee, at one hour interval, and continued the above permanganate mixture every 15 minutes, for another three hours, when I had satisfaction of finding the child quite conscious and being suckled by her mother. Her pupils were still contracted, but her pulse was fair and she was well, having in all taken only 5 grains of the permanganate of potash.

OBSERVATIONS IN A CASE OF DIABETES MELLITUS.

REPORTED BY DOLATRAI DANYABAI, C. M. S.

West Hospital, Rajkot.

A PATIENT named APA MANGUR was admitted in the West Hospital, Rajkot, on 3rd December 1894, complaining of frequent micturition, excessive thirst and collection of ants about his urine. He was emaciated, skin dry. Urine 94 ozs. in 24 hours, sp. gr. 1010. Sugar present in large quantity. Since admission he was put on milk diet and codea $\frac{1}{2}$ gr. thrice a day.

EXAMINATION OF URINE.

| DATE. | Quantity ozs. | Specific Gravity. | Sugar. |
|----------------|---------------|-------------------|----------|
| 3rd December | 94 | 1010 | * |
| 8th " | 52 | 1010 | Nil. |
| 9th " | 54 | 1020 | |
| 10th " | 74 | 1016 | |
| 15th " | 62 | 1008 | Nil. |
| 16th " | 84 | 1010 | |
| 18th " | 77 | 1023 | |
| 19th " | 60 | 1024 | Slight. |
| 20th " | 32 | 1030 | |
| 21st " | 56 | 1030 | Present. |
| 22nd " | 70 | 1022 | |
| From Dec. 25th | 46 | 1008 | Nil. |
| to | to | to | |
| Jan. 5th | 60 | 1012 | |

*Present in large quantity.

Remarks.—Codea accompanied with milk diet reduced the quantity of urine and the sugar disappeared on the 6th day. He diet consisted of the continuance and discontinuance of bread, sugar and fresh vegetables (leaves) on and off.

I am much obliged to Surgeon-Lieutenant Colonel, F. C. BARKER, M.D., F.R.C. S.I., Medical Officer in charge, for kindly permitting me to report this case.

³A tea nut commonly termed *betel nut*.

OUR PICTURE GALLERY.

SIR JOSEPH EWART, M.D., F.R.C.P., F.C.C.

*Deputy Surgeon-General, I.M.S., (retired) and
J.P. for Brighton, Sussex and Cumberland.*

SIR JOSEPH EWART was educated under the Rev. James Horn, Rector of Stapleton, Cumberland, and the Rev. HUGH STUBBS, head master, High School, Carlisle, and subsequently to entering upon a regular course of medical study, he studied theoretical and practical chemistry under Professor PENNY, and surgical and descriptive anatomy under Professor BUCHANAN, Glasgow. In 1850-51 he was enrolled a student at Guy's Hospital, London. He became a member of the Royal College of Surgeons of England, a Licentiate of Midwifery of the Royal College of Surgeons, and Doctor of Medicine of the University of St. Andrews in 1853. In August of which year he was the only successful competitor for the East India Company's Medical Service, and was ordered to Calcutta, where on his arrival on 31st January 1854, he was first attached to the European General Hospital under GEORGE NICHOLSON. He subsequently did military duty with the headquarters of the Bengal Artillery at Dum-Dum, with the 18th N. I. at Barrackpore, and the 40th N. I. at Dinapore. He was Civil Surgeon of Ajmeer from the 14th August 1854 till 5th March 1857, when he was appointed to the medical charge of the Meywar Blue Corps, Kherwarrah, which he held until 15th November 1861, when he was placed on special duty in the arrear office of the Principal Inspector-General of the Medical Department to organise the statistical office, which he left on being appointed, (10th December 1862), Professor of Physiology and Comparative Anatomy in the Medical College, Calcutta.

He was elected a member of the Council of the Asiatic Society on 7th October 1863, and (27th November 1866) was appointed to officiate as Principal of the Calcutta Medical College and Professor of Medicine, and First Physician to the College Hospital, but on Dr. CHEVREUX's return from leave of absence, he reverted to Professorship of Physiology, &c. On 16th January 1868, being the year before he had been elected a Fellow of the Calcutta University, he was elected President of the Bengal Branch of the British Medical Association in 1869, and member of the Bengal Social Science Association, of which he was President for two successive years, and in this capacity he materially helped Miss MARY CARPENTER in her philanthropic endeavours to promote female education in India. The meetings held in the Town Hall were crowded, and the Presidential addresses were attended by H. E. the Viceroy, LORD MAYO; SIR RICHARD TEMPLE, the Lieutenant Governor of Bengal; BISHOP MILNES, SIR JOSEPH FAYRE, and a number of distinguished Europeans and natives.

DR. EWART was appointed Surgeon Superintendent of the European General Hospital, Calcutta, from 1872 to 1876, during which period he also held the following ex-officio appointments:—President of the Faculty of Medicine and Examiner in Medicine in the Calcutta University; Municipal Commissioner and Justice of the Peace for Calcutta; President of the Snake Poison Commis-

sion and Physician to the Mysore princes. He left India on medical certificate on the 10th April 1878, and in 1879 retiring with rank of Deputy-Surgeon-General settled in Brighton.

Besides being for some of the concluding years of his service Editor and Proprietor of the *Indian Annals of Medical Science*, DR. EWART's literary work includes (1) *The Vital Statistics of the European and Native Armies of India* (2) *The Sanitary Condition of Indian Jails*, on the strength of which he was promised the Inspector-Generalship of Gaols, but he respectfully declined; (3) *Catalogue and Classification of the Pathological Preparations in the Calcutta Medical College Museum*, for which he received the warm thanks of his colleagues; (4) *Poisonous Snakes in India*, chiefly intended to enable District Officers to easily recognise them; (5) Joint author of *Report of the Commission on Indian and Australian Snake-poisoning*; (6) Article on *Dysentery* in *Quain's Medical Dictionary*; (7) *Review of the Treatment of Indian Diseases*; (8) *Typhoid and Typhus Fever in the Ajmeer Jail*, where he was the first to identify the existence of typhoid fever among the natives in India; (9) *The Vital Statistics of the Meywar Blue Corps*, which the Director-General of the Medical Department was pleased to call a model report; (10) *Treatment of Dysentery by large doses of Ipecacuanha*; (11) *Phthisis in India*; (12) Two addresses in the transactions of the *Epidemiological Society of London* during two years' presidency of same in 1890-91 and 1891-92, and many papers published in the medical journals and transactions of learned societies.

It was not till 1884 that DR. EWART began to take an interest in local affairs, and ventured to contest St. Nicholas' ward and was returned to the Town Council by an enormous majority. He was made an Alderman in April 1890, and took up a warm interest in municipal work that he was unanimously elected Mayor in three successive years, 91-92, 92-93, 93-94, during the two last of which a complimentary banquet was given in his honor by his fellow townsmen. At the banquet given by the Mayor to his fellow townsmen and others in his first year of office, and at the two banquets given to DR. EWART in the 9th November 1892 and 1893, the toast of "The Mayor" was proposed in felicitous terms by Sir JOSEPH FAYRE, K.C.S.I., F.R.S., a highly esteemed colleague in former days, in arms and medical work. A local contemporary (*Brighton Herald*, May 25th 1895) says:—

"Of the dignity, the unassumingness, the hospitality, and the ready adaptability to circumstances with which DR. EWART went through his three years' Mayoralty little need be said; nor of the amiability, tact, and enthusiasm with which his sister (Miss Grace Ewart) assisted her brother as Mayoress of the borough. This honorable phase of his career is fresh to the memories of the townspeople. It may, however, be well to recall that DR. EWART's period of office witnesses the taking over and extension by the Corporation of Technical Schools and Art Education, the dedication of the clock tower in Preston Park, the opening of Queen's Park, the starting of a Corporation Band, the celebration of the Duke of York's wedding, His Worship's own three brilliant receptions at the Pavilion, the raising of a Sick Relief Fund for Worthing, the collection of large Hospital Saturday Funds, the opening of Cobden Road Baths, the



Yours Very Sincerely
Joseph Swast



opening of the Abattoir, the clearance of some of Brighton's slums, the opening of the Blaker Recreation Ground, the development of the Electric Light undertaking and the lighting of King's Road by electricity, and the division of the town into fourteen wards."

DR. EWART'S public work in Brighton has not been confined to the Corporation only, as for the last eight years he has been an active member of the School Board, and as Deputy Chairman of the School Attendance Committee has persistently advocated the provision of adequate accommodation to meet the increasing number of children on the roll. Four grand and commodious new schools have been built under his hearty sympathy and support; for he has always been a consistent advocate of free education. He is a Trustee and a Founder of the Throat and Ear Hospital, and has rendered distinguished professional and sanitary service to the town. He is senior Consulting Physician to the Royal Alexandra Hospital for sick children. In 1884-85 he was elected President of the Brighton and Sussex Natural History Society. In his first and second mayoralities he was President of the Epidemiological Society of London, but in the third year of his mayoralty, he became President of the Brighton Medico-Chirurgical Society. He is a loyal and genial Freemason, and is now the Master of the Yarrowburgh Lodge, as well as a Governor of every hospital and medical charity in the town. To commemorate his services to Brighton, a full-sized oil painting of DR. EWART, in mayoral robes, by the celebrated artist, MR. WYERHALL, was presented to the Corporation by MR. COUNCILOR WILLETT, J. P., and now occupies a conspicuous position and permanent home in the local art gallery. He was knighted by the Queen at Windsor Castle, on the 18th of July last "in recognition of services rendered to the medical profession and as Mayor of the important Municipality of Brighton," and the announcement of the Queen's recognition of his merit met with a most cordial chorus of approval in his native country of Cumberland and the town of his adoption as well as by the lay and medical press in all parts of the United Kingdom.

The successful career of SIR JOSEPH EWART offers object lessons to every one called upon to make his own way in life, as though provided with a thoroughly good sound education accompanied by diligent, moral, and religious training, directed to entering the ministry of the Presbyterian Church, &c., he replied, when asked what occupation he wished to follow: "That of the medical profession." He was duly apprenticed, according to the usage of the times, imbued with the idea that after he obtained his diplomas in medicine he would have to depend upon himself, and on the completion of the medical curriculum. He was looking around for employment, when he was greatly surprised, one morning, to find on the notice board of his *alma mater* an announcement that an Assistant Surgeoncy in the Hon. East India Company's service was put up for public competition by those students of the institution who were nearing the end of or had just completed the curriculum. DR. EWART strove for, and won the prize, and soon afterwards sailed in the *Colombo* for the metropolis of British India, where he landed without an introduction or a friend beyond the principles of thrift, self-reliance and devotion to work in which he had been reared and trained. The Marquis of Dalhousie, then Governor-General, appointed

him to the Civil Surgeoncy of Ajmeer, whence he was transferred to the charge of Meywar Bheel Corps at Kharwara, just on the eve of the great mutiny, through which his regiment remained loyal and beyond keeping open the communications, for a time, between Calcutta and the Punjab across the Bikaner Desert by means of Sowran camels and sundry scores of the vicinity or approach of the fugitive Tantia Toppe, the unsettlement of a troop of the 1st Bengal Cavalry, and the assassination of the Risaldar Major and his immediate subordinate, there was nothing to unripple the even tenor of our way. His claim for further promotion came unsolicited one fine morning, after the mutiny, when the Commanding Officer was directed to take steps to relieve him in order that he might take up the special duty of putting into shape the arrear statistics of the Medical Department.

These statistics had been pushed on with all practicable expedition, when DR. EWART was offered the chair of Physiology and Comparative Anatomy and Curator of the Medical College Museum, rendered vacant by the death of DR. CROUWER. The chief work, though self-imposed, here was to arrange and so classify a chaotic accumulation of pathological specimens as to facilitate their utilization by students and professors.

In due course higher promotion awaited DR. EWART on the departure of DR. CHEVERS, Principal of the Medical College and First Physician to the College Hospital, on furlough to Europe. He was requested to officiate in these important and responsible appointments. On the return of DR. CHEVERS, he reverted to his permanent appointment, but eventually the *lucrative* post of Surgeon to the European General Hospital and attached Presidency Surgeonship fell vacant, and LORD MAYO offered them to DR. EWART, and he held those appointments until the effects of a serious attack of typhoid fever necessitated for the second time that he should avail himself of sick leave to Europe (1876). Extensions were obtained until 1879, when being unable to resume duty, he was reluctantly compelled to retire, and terminate his labor in India, which had always been congenial, and attractive to him and where he got on well with the natives, with whom he sympathized to the full, and especially did he feel the wrench of being obliged to sever himself from the students who crowded the class room, his colleagues and the many friends who sought his advice in their trials of difficulty and danger. Brighton has quite renewed DR. EWART'S health, and he now looks back in his new career there, probably not yet finished, with unmitigated pleasure and satisfaction. He is not without hope that he may be spared to, at an early date, spend a winter in India, and renew his friendships and acquaintance with those of his students, colleagues and clients who may still, under Providence, remain at their posts of work, duty and honor—and particularly those of all creeds and castes for whom he had some small part, for many years, in laying the foundation on which has been raised a superstructure enabling them as physicians, surgeons, obstetricians or sanitarians to heal the troubles which poor humanity is heir to, to prolong life by constantly applying to practice the principles of the grand science of sanitation to the prevention of mitigable, avoidable and preventible diseases and so to illustrate the truth of the proverb, that "Prevention is better than cure."

THE Indian Medical Record.

1st October, 1895.

MEDICAL STUDENTS—REAL AND UNREAL.

Dr. BOMFORD, the Principal of the Calcutta Medical College, has issued an edict that the ordinary annual Test and Honor Examinations of the College shall in future be compulsory instead of optional and judged by the results of the same, students who show an inaptitude or indifference for medical study, shall be struck off the rolls. In Dr. BOMFORD's own trite and expressive language, the order reads thus: "I am determined to make this College as incompatible as I can for unreal students." We have received numerous letters on this subject, all taking the part of the students as against their professors, and we have seen volumes of abuse levelled at Professor BOMFORD for his action in this matter. We have wondered how it was possible for these disputants to have so allowed their feelings to overcome their better and sounder judgement. Surely it is in the best interests of parents and guardians that in endeavoring to select a suitable profession for their wards, that any mistake in such choice should be discovered at the very threshold of the career upon which they purpose their charges should launch. Even students should commend the foresight and prudence of a rule which conserves mind, body and estate, and prevents a misuse of one or the other. Every medical student in the world knows but too well ere a twelvemonth of his course is experienced, whether the natural bent of his mind has been suitably directed in his youthfully formed decision to become a Doctor of Medicine. And what better evidence of this unnaturalness of selection can we have than the results of the tests that are applied to ascertain the value of his studies. The student who has made a selection harmonious with his mind and his nature will have carried on his studies assiduously and enthusiastically; while, on the other hand, the young man who has mistaken his avocation, and acted in discord with the natural bent of his mental calibre, will be found, when the test is applied, to have frittered away his time, and neglected his books.

Dr. BOMFORD has rightly classified these students into real and unreal, and he does the unreal man a real service by pointing out to him the error of his ways, the unreasonableness of his choice, and the wastefulness and injury to his parents to persist in prosecuting so uncongenial a course of study. We are surprised indeed to find that so many cultured and experienced administrators, as Dr. BOMFORD's predecessors undoubtedly have been—have failed to exercise this kindly and discriminative judgment in the very best interests of the students who were under their care. How many young men, who for years had fondly hoped to slide through the portals of the College by some stroke of luck, and during those years of painful anxiety to their parents, had neglected their studies, wasted their patrimony and were ultimately compelled to give up the task of waiting upon fortune, returning to their homes with the best part of their life fruitlessly spent with nothing but a gloomy prospect of entering at last upon some

new venture to gain a livelihood. Who does not know how the country is overrun with a discontented, worthless class of unqualified medical practitioners, who style themselves failed M. B.'s, or failed L.M.S.'s. To permit an unpromising medical student to continue for a series of years a hopeless and uncongenial line of work in our educational hospitals, is tantamount to criminal neglect of the interests of parents and guardians, of the students themselves and of society at large, while it seriously compromises the reputation of the institution that allows these wretched students to hang on in their hopelessly cheerless course. When they leave the College as failures, they settle down in some part of the country as practitioners, and here they are even worse than failures, for they become an element of danger to society in being imperfectly equipped and professionally unqualified to practice medicine. We reiterate that the motives which actuate this ruling of the Principal of the Medical College are such as will inevitably conduce to the best interests of the students and of the College. We would solemnly urge our young friends who are studying medicine not to be led away by any unkindly feelings towards their professors and teachers. It is quite possible to misconstrue the loftiest of motives and to vilify the best of intentions, but we aver conscientiously that the application of this punitive ruling can only affect such students who would reflect no credit on themselves nor on the College, by remaining on its rolls, when the evidence of their work and worth gave them no moral right to continue in a career that promised nothing but failure and ill success. It is a great mistake to credit the professors with any suggestion that they desire to diminish the number of competitors who enter the ranks of private medical practitioners from the portals of the Calcutta Medical College. It is certainly to their credit if they can turn out as many good men as possible, and this is their sincere desire. It is but natural and logical that acting in defence of their own reputation and in the highest interests of the College, the students and the public, they feel it their duty to approve the action of Professor BOMFORD, the Principal of the College, and to support him in carrying out a reform that must act beneficially on all concerned. It is said that enthusiasm is contagious. So is idleness. Hence as it is demoralising to keep idle, worthless students in any school because of their baneful influence on others, so it is commendable and right to protect the good who desire to work from those whose example can do nothing but harm. By all means let us support any measure which is right in its motives, and we may safely leave the results to time, for right always wins.

ADVICE TO YOUNG PRACTITIONERS.

THE young practitioner has many difficulties to contend against; and one among the many is the rather general belief that he must give himself the luxury of a wife if he hopes to succeed in building up a good practice. Dr. STUART MCGUIRE, of Virginia, in trying to determine the grounds upon which the public objects to employing an unmarried physician, argues that, as the unmarried physician is his own master, his mind not being occupied by

domestic cares, his interest not being divided between work and his family, and not being the possessor of a trusted but often foolish wife to whom his patient's confidences are communicated.—All these, thinks Dr. McGuire, should make the unmarried doctor a more welcome physician than the married one. We have no desire to handicap the unmarried practitioner by setting the public against the state of single-blessedness, which he may choose, or find it necessary to adopt; but we think that Dr. McGuire's arguments, though theoretically sound, are practically defective. Matrimony may not be a stimulus to mental development, nor should married men be regarded as wiser than the single. Matrimony does not increase a man's professional abilities; nor should one marry simply for the sake of getting on in practice. All this we quite concede to Dr. McGuire; but there are considerations, the correctness of which Dr. McGuire not only doubts but denies, which justify the general preference for the married physician. For instance, Dr. McGuire thinks that there is no lack of sympathy on the part of one who has no wife or child of his own. We would be very reluctant to charge any practitioner, married or unmarried, with being wholly unsympathetic; but every pater-familias knows that his sympathy is of a deeper and truer type than that which he felt in his anti-matrimonial days. Dr. McGuire furthermore adds that "until matrimony shall prove itself a moral safeguard, it cannot possibly enter into this question." Of course it would be downright folly and impertinence to impute vice to the unmarried physician and to make morality and matrimony synonymous terms. But surely Dr. McGuire must admit that while society does not regard matrimony as an infallible moral safeguard; it does hold it to be very much a safeguard; and even from these considerations the public is to be pardoned for any preference it may shew for married physicians. We do not think that "the only possible explanation left is one that is more than a reflection on the doctor's morals." We would indeed very much resent this selectiveness of the public for the married physician, if, by so doing, it in any way impeached the morals of any section of the profession; and we do not think that the public means to thus tacitly malign the unmarried physician.

It is not the married or unmarried condition of the physician so much as his youth that affects these cases, and that without any insult being intended or offered to the morals or professional abilities and experience of the young physician. It is an unexplainable delicacy, hard to be overcome, which affects the whole question. There is much to be found to prove the accuracy of these views. For instance, although the young unmarried physician may not be consulted in reference to the ailments of the ladies of a house, he may be an ever welcome and respected visitor and friend of the family, and perhaps even gladly permitted to form a matrimonial alliance in the family. Again, it may be observed, that while a mother has unlimited confidence in the professional abilities and morality of a young married physician, to whose care alone and to none other she would commit her child of tender years, however dangerously ill, she would yet even in minor ailments of a certain class prefer to consult the

hoary headed bachelor physician of whose experience and morals she may know little or nothing. In none of these cases do morals and experience enter into the consideration; or the fact of a physician being married or unmarried influences the patient's action. This nineteenth century civilisation is not so unreasonable and illogical as to gauge morality by years of individual existence; and it moreover admits that, in the medical profession as well as in any other, there are to be found old heads on very young shoulders, and that age moreover does not always bring with it experience. If then the unmarried physician appears to be placed at a disadvantage in practice, it is to some extent due to his being supposed to be not as truly and keenly sympathetic as the physician with a family. It is a common saying that one must be a parent in order that he may fully realise a father or mother's feelings in any family loss or misfortune. This does not impute hard-heartedness or absence of kindly feeling in the rest of mortals; but that circumstances have naturally rendered the feelings of the one class of beings more tender and more easily and readily affected than those of the other class. The bare fact of a physician being unmarried scarcely affects his practice in any other way. The unmarried physician is generally young, and it is his youth and not his unmarried state that stands so much in the way of his employment under certain circumstances, just as the young married physician, as we have shewn, is in similar cases and is therefore not applied to nor consulted, the patients at the same time intending no reflection on the skill or morals of either physician. We cannot, however, take it as proved by Dr. McGuire that as medicine "demands singleness of purpose and undivided devotion" the unmarried must *pari passu* the better doctor. Matrimony does not destroy, in the physician, devotion to his duties and a love for his work; nor is the unmarried physician so free from worldly cares and distractions as to be able to devote all his time and energies to his profession. The possession of a family is often the married physician's stimulus to greater exertion and to the expansion of his energies; while a judiciously chosen helpmate will not only lighten one's labours, but also help him to better bear the worries and disappointments, from various causes, to which the physician is liable.

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ARE CHEMICAL EXAMINERS INFALLIBLE?

Our article on Chemical Examiners, in an issue of not very long ago, receives ample justification and confirmation from the following remarks of Counsel for the defence in a case of culpable homicide amounting to murder, which was tried at the last Criminal Sessions held at Madras: When a man's life was at stake, it was very necessary that the greatest care should be exercised. The Chemical Examiner, according to his own admission, had but a small acquaintance with analytical chemistry. While he was in England he had, some ten years ago, attended a few lectures on the subject, but did not conduct an analytical inquiry. This was the first enquiry he conducted, after his appointment to his present office, for the purpose of tracing arsenic. A series of testings

that are really the most easy known in analytical or forensic chemistry. The jury could not, upon the evidence of such a witness, convict the prisoner. With regard to GOOLAB ROY, the assistant to the Chemical Examiner, the learned Counsel urged that he was more or less aware that his superior did not know much about the subject, and they might take it that he did just as he pleased." We take this extract from the *Madras Times*, and make the remark, in passing, that the chemical analysis in this instance was entrusted by the Chemical Examiner to his assistant. We sympathise with any professional man who may be subjected in an open court to the humiliation which such remarks inflict; but we cannot find fault with the learned Counsel in this case. So long as a Commission in the Indian Medical Service is the all important and indispensable requirement for the Government Chemical Examinership with its State-protection against subpernas and cross-examination in the law courts, and in other posts, we must expect to see round men thrust into square holes and *vice versa*: and so long too must Government expect to have reflections cast on its nominations. Given the civil chemical expert and the commissioned medico of "test-tube experience" to select from for such appointments and the office is bound to fall to the latter: the post lies within the preserve mapped out by Government for the Indian Medical Service, and no considerations will sanction this limitation being encroached upon. Can a Government be credited with holding human life as sacred when it commits enquiries affecting the very lives and liberties of such of its subjects, who may have the misfortune of getting mixed up in criminal matters, into the hands of raw recruits in the field of chemical investigation? The case in point is strikingly illustrative of the danger and ridiculousness of these nominations. The Chemical Examiner in question is a Surgeon-Captain of little over eight years' service. His chemical knowledge and experience appear to be nothing more than that obtained in the ordinary course to qualify for a registrable British qualification to practice medicine. We all know that if such knowledge and experience of chemistry cannot be exactly pronounced scant and superficial, it certainly little fits one for the important analytical work demanded of Chemical Examiners to our Governments. The special aptitude (?) of the officers in question for chemical analysis was however detected by the Madras Government some two or three months ago on the permanent incumbent having made up his mind to proceed on furlough. It is wonderful with what facility, and in what a short space of time, our Governments in India are able to hatch and give full feathers to chemical experts, or for the matter of that to any medical professor. The period of incubation, growth, and perfect fledging occupies only as much time as it takes for the sanction of the arrangement, and the passing of the order through the Government press. Three or more sessions will have been held before the permanent incumbent will have returned to his post of Chemical Examiner with the Government of Madras, and goodness only knows how many unfortunate dooms will, by that time, have been irretrievably sealed on the authority of the acting veritable tyro in chemical matters. Would it not be far better to give the acting appointment in a case

such as this to the experienced assistant than to one whom neither experience nor training, but a Government *foet* dangerously presumes to manufacture? If the assistant can acknowledgedly be entrusted with such analytical work, while the inefficient Government Examiner is, endeavouring to gain experience, what necessity or advantage is there to the state, to the law, or to the public in having a nominal figure head, while the work and responsibility of the assistant are increased?

We would draw attention to one other class of appointments which are filled with little or no regard to the training, aptitude, or experience of the incumbents, *viz.*, the superintendence of lunatic asylums in this country. It is not long since we were treated in an important and especial report to a very outspoken expression of opinion on the way in which the asylums are officered. The entire lack of special training in the superintendents was attacked in terms which we are not able to reproduce, but in which, we feel fairly safe in stating, ignorance and such like expressions entered. Mental disorders form one of the regions, of our profession, which is said to have been little explored during the past thirty years and more; and we can scarce hope that, even to the end of time, India will ever be able to contribute any quota of improvement or advance in this direction if her superintendents of lunatic asylums are to be so decidedly unfitted in most instances for their charges; and unfitted we must expect them to be so long as a Netley, course and a place in the Indian Medical Service are the only gates by which men can get to be appointed to the charge of these asylums.

All these ill-advised and unsuitable nominations must be expected to lead to unpalatable, yet just, reflections on the Government, on the nominees, and on the service to which the nominees belong; and they are harmful-furthermore in bringing disrepute on the profession. It may be urged by some that no honest physician should enter upon duties to which he feels he cannot do justice, or which he thinks himself incompetent to discharge; but it is the present condition regulating appointments, and not the service men, that are essentially to be blamed. The men know that the appointments must go to service men, and that the general medical education of the men of their service is much the same; so that one may feel that while he perhaps cannot do much more good in any of these special appointments than another of the service can, he may justly content himself with thinking that he certainly cannot do very much more harm, and that he may, as well as any other, and with no more injustice, hold the appointment that offers, or is offered to him.

It is quite evident that no justice can be done to our calling, or to State interests, or to our people, and that no encouragement can be given to specialism in this country so long as selections for special appointments are made from a limited field and from among a favored few.

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THE BRITISH LAW OF INFANTICIDE.

AFTER carefully wading through all the literature available in Great Britain concerning crimes relating to pregnancy Professor, JOHN GLAISTER, M.D., L.M.C.P.&S., D.P.H., of St. Mungo's College, Glasgow, urges that as the thought is always father to the act and the culpa lies just as much in the commission of, as in the intent to commit,

a crime; there ought to be no difference whether the illegal operation be successful or not when meting out the award for the offence. He pleads strongly that the British law dealing with criminal abortion is in some respects "illogical and inconclusive that it needs instant and considerable amendment; as a premium is offered to crime by the rulings that though any attempt to hasten the expulsion of the product of conception before it reaches maturity and natural delivery constitutes an offence, amenable to criminal law, still any one may, with absolute impunity, murder a child during the process of natural birth, provided an independent witness be present at the killing, and it is not a crime to destroy a child *in utero*, by violence, no matter whether it be quick or not (because though it be quick it is only *pars viscerum matris* and not a separate being under the king's peace) provided that the violence is not accompanied by the consequent premature expulsion of the fetus from its mother's body. But should the fetus survive this violence and after going on to full-term and natural birth then die by reason of the injuries priorly received, the person who caused the violence will be chargeable with the crime of murder. In its present condition the law seems made not with the object of convicting and punishing the child murderers, but of ensuring her acquittal from this serious crime: for *physiological* life begins from the very moment of conception, while *legal* life, except in judicial homicide, matters testamentary and *in possession fratris*, does not begin until it becomes a distinctly self-existent human being, whose entire body has been delivered from its mother by natural birth, and English canonical law considers life not to commence before the infant quickens by being able to stir in its mother's womb. Suppose these facts were generally known, women, instead of covering their disgrace by inducing abortion and thus risking a criminal prosecution, would wait for a few weeks longer till natural delivery was about to take place, when they could cover their shame and escape and defy the rigors of the law by seducing a friend to stand by and smother, or otherwise kill the babe as soon as its head and neck saw the outer world; while the remainder of the body was still *in utero*: for the woman or person who deliberately does an infant to death *during* natural labor, but before it has been wholly born is not guilty of any offence against the law. And all this confusion and failure of justice must exist so long as the law, instead of being concise and definite as to the meaning of the terms "new-born" and "live-birth", raises difficulties by creating differences in their interpretation by the legal and the medical mind. DR. GLAISTER gives several instances where, in its present condition, the law is far too inadequate to meet the ends of humanity and justice by assuming the peculiar attitude of preventing conviction on the charge of infanticide, even though the violence that destroyed the child may be of the most brutal character, because, though he could safely take oath that the child was alive when a portion of its body was born, the medical expert cannot be certain, much more swear, that the *whole* of the infant's body was born before the violence was offered. Medically there is no difference as to whether a child, other than still-born, be wholly or partially born to establish the fact of its being alive at natural birth, and

while the civil law demands that the sign of live-birth be any attempt, no matter how feeble or how imperfect, on the part of the child to breathe, the criminal law, in a manner affords an indigement to crime by defining "new-born" as a child that is "wholly born," i.e. "one whose entire body has been delivered from the body of its mother" and "live-birth" as a child in whom independent existence has been established by the action of its own organs *after complete* delivery and that till delivery be complete a child cannot be considered as a creature in being and under the king's peace. These then, he holds are conditions and anomalies very serious to contemplate and common sense and justice demand that they should no longer exist.

CHRONIC INEBRIETY FROM A MEDICO-LEGAL POINT OF VIEW.

WHILE lecturing before the American Association for the study and cure of inebriety, T. D. CROTHERS, Esq. M.D., urged that as chronic inebriety was common to all classes of society, whether rich or poor, high or low, it behoved all, criminally inclined, who had "drink histories" attached to them to place themselves under the care of some competent doctor before their cases are adjudicated, so as to enable him to determine what disposition should be made of them as they are *not* accountable for crimes committed on the impulse of the moment, while under alcoholic influence.

Dividing chronic inebriates into two classes, the *continuous* and the *periodic* drinkers (The former of whom drink daily and to excess whenever they can procure liquor, and the latter have distinct drink paroxysms which subside, usually, from exhaustion and begin afresh when a degree of restoration comes on) he points out that whether they be of large coarse frame or of small irregular development, the entire bodies of people of the latter class seem to be stamped with signs of imperfection and degeneration and a broken down nervous system.

Arguing strongly in favor of *heredity* as an important factor, he also contends that the continual indulgence of all the impulses and passions in surroundings full of the contagion of bad examples, dangerous insanitary conditions: irregular or unhealthy living, sleeping in insufficiently lighted, or badly ventilated rooms, living on unnutritious food or in a depraved mental atmosphere, all help to promote chronic inebriety, rob a man of every thing pure and noble and leave him a perfect wreck, morally as well as physically. He points out that while chronic inebriates manifest an unusual susceptibility to the personal influence of those persons (particularly to some favorite bar-keeper) who join them in drink, they exhibit an antipathy and even hatred towards anyone who antagonizes their conduct and mode of life. In this feature appears to lie a peculiar hypnotic power which varies widely in force and duration, and is very unstable; for while it may be used for the purpose of crime it cannot be depended on to conceal such crime, as chronic and degenerate inebriates, while susceptible to criminal suggestions, lack the reason and steadiness of purpose necessary to perfect suggestion. The confused brain and rapid

physiological changes rendering fixity of purpose and rationality of action impossible. Each glass of spirits increases the circulation of the blood in the brain for a brief space, but very soon diminishes it. The exhilaration and rapid thinking of one period being so closely followed by the slow, confused thought and heavy depression of another, fixity of idea, sequence of argument and continuity of action become so impossible as to in great measure render criminal suggestions inert or contrary to the plan snapped out. Now as many of the criminal acts of inebriates come from centres of infection and are fatal, unreasoning, largely accidental and of an insane transitory type, he finds that sexual crimes are much more rare than are acts of violence; in that excessive alcoholic indulgence so early exhausts the sexual impulse as to render criminal passion a very small element in criminal acts; and he therefore thinks that the chronic inebriate should be treated as a dangerous lunatic.

COMMENTS AND NEWS.

THE MEDICAL PRACTICE QUESTION IN INDIA.

THE *Indian Planter's Gazette* continues its *exposé* of the official monopoly of medical practice in India, and in its second article on this subject, our esteemed contemporary deals with "THE WORK OF OFFICIAL DOCTORS" as follows:—

"In our last article we endeavoured to prove that however justifiable may have been the necessity 50 years ago of permitting Government doctors to engage in private practice, or to supply the medical needs of the civil population in our large cities, no such need, we also definitely proved, exists in the present day. We proved that numerically there was a sufficient supply of civil or independent physicians to meet all the demands of the European inhabitants of our large cities, as a distinctly European journal we are dealing entirely with European interests as apart from purely native interests. We maintained that neither necessity, nor any other consideration can possibly justify the present state of things, which permits State-paid doctors to enter the field of private enterprise in rivalry with independent physicians, just as though they had no obligations whatever to fulfil towards the Government which pays them handsome salaries for certain well-defined, stipulated duties.

One would naturally ask what is it that Government doctors in our large cities have to do? How is it that they have so much leisure at their disposal? What indeed is it that they receive their handsome salaries for? We will endeavour to answer these questions.

We will take the case of a Surgeon-Lieutenant-Colonel who holds the post of First Surgeon to the Calcutta Medical College Hospital, who is a Professor of the Science and Art of Surgery. Verily it might be said, a doctor who has the responsibility and care of at least 70 patients on his hands daily and who has to teach about 180 students in his class all they ought to know of practical and operative surgery and instil into their minds all the varying features of a tiresome nomenclature of surgical diseases, has undoubtedly a very huge task to perform. When it is remembered also that a gentleman holding the position of a representative surgeon to a large educational institution is not expected to scamp his work day by day, or to ride rough-shod over his responsibilities towards his profession in regard to advancing original scientific research in his particular domain, when we find that such a man is naturally expected to be not only a skilled

operative surgeon, but a lecturer and teacher in the department of surgery, we are clearly told that the fulfilment of such a task is almost, if not absolutely, impossible for him to do the work of a general practitioner besides. For just as truly as the British system declares that a man cannot serve two masters, so it is demonstratively true that a medical official fully performing his State-paid duties cannot find time to be a private practitioner. There is no evading this view of this question. A surgeon and a professor to one of our hospitals in London is very differently situated, both in status and work, to a doctor holding the same position in one of our Indian Hospital Colleges. In London, we find the surgeon to Guy's Hospital, for example, is a man who stands pre-eminent in surgery. He is assisted by a staff of surgeons and assistant surgeons, who in their turn are men head and shoulders above their comrades. Here in India the surgical or other professor is manufactured by Government edict, and has merely the assistance of a newly-fledged junior army surgeon and a babu assistant-surgeon, who are absolutely without any real experience worth the name. The responsibility therefore of prescribing and generally caring for the patient lies morally upon the surgical professor. We stated that such an officer had 70 patients to care for. Allowing that each patient on an average requires even so little time as 5 minutes for attention to his or her case, this would involve a stay of at least 5 hours at the hospital. But surely some cases would need more than 5 minutes of the surgeon's attention, and this would necessarily further prolong his stay in the hospital wards. Then we have also the fact that this officer has to teach about 180 embryo saw-bones the mystical art of enucleating tumours, amputating limbs, tying arteries, and leading them through all the meshes and intricacies that are involved in the study of clinical surgery. Who will dare to declare that these are not onerous and laborious duties? Where can such a thoroughly occupied mind find leisure for multiplying its cares and responsibilities by under-taking the duties of a private physician to numerous families in the city, or of being the medical advisor to several private schools, insurance offices, pension funds, and various trading houses.

Be it remembered always that such a man's time and talents belong primarily and legitimately to the surgical inmates of the Medical College Hospital to whose aid he is liable, at any time of the day or night, to be summoned. To consider only the solitary interests of the poor patients whom the Government pays him to attend, how can it be possible for the man, who is liable, at any and all times, to be called to attend such patients, to be able to obey the summons when it comes, if he is busily engaged in private practice during every spare moment he is outside the four walls of the Medical College Hospital? We maintain without fear of contradiction that every Government doctor who is engaged as a professor of any branch of medicine in any of our College Hospitals has more than enough to do of *State work*—if that be done efficiently and thoroughly to leave him no more leisure time than secretaries to Government, or judges or engineers or educationalists have when their day's work is over. We have heard it said that many a zealous professor of the Medical College has conscientiously declared that were *private practice*, by the professors, put a stop to, our Colleges would become more popular, our students be better educated, and medical science and original research advance by leaps and bounds. To add to this long list of official burdens we have the fact that these Government doctors are bound, as an act of duty, to attend free of charge, all servants of the State who require their services in times of sickness. This latter task would be gigantic enough in itself.

men are actually studied of by those who are entitled to the highest medical knowledge. Yet how many a Government servant doctor has seen with the painful ordeal of inviting to his aid the Government doctor who is careworn and dead-beat by his self-imposed struggle in the domain of private enterprise! The sufferer is invariably told to go to the Government hospital, where he will receive regular attendance, and he must follow this course at the maximum of discomfort to himself and the minimum of labor to the Government-paid doctor. When it is remembered that these Government doctors are supposed to hold the dignified position of professors and consultants in their various specialities, is it not inconsistent or rather *infra dig* that they should trot about as the rivals of the general family physicians? Were they to occupy their rightful positions as consultants and adhere strictly to their special lines of work, doing all in their power to make themselves eminent by their diligence and original research, we might be justified in claiming for the public and for the general body of practising physicians, that these men be allowed the privilege of being used as consultants pure and simple. We believe that as consultants there is every reasonable hope of a really lucrative addition to their official income by such special practices, and we maintain that when so specially qualified, the limitation of Government doctors to consulting practice alone is what the occasion and the necessities of the public and of the independent medical profession urgently and imperatively demand.

MEDICAL CERTIFICATES AND THE BENGAL GOVERNMENT.

ALL over the civilised world it is urged that State-competition, whether in merchandise or in professional services, is decidedly unjust to the subject; but here in India, where private practitioners are plentiful and medical certificates obtained a gold mohur (£1 or \$5) ahead, the Bengal Government (No. 298 T. M. of 11th September 1895) has just ruled that medical certificates required for the purpose of leave, retirement or fitness for State employment must in future be signed by Presidency Surgeons, only, of the Indian Medical Service, and that a fee of Rs. 4 (£0-4-5 or about \$1-08) is to be charged for such medical examination. Thus adding another heavy strain on the members of a service who are already complaining that they are overpowered and broken down by the magnitude of their duties.

Inconsistency is alleged to be a feminine failing, but it scarce savors of consistency or of sense that the same body of men, who, in England, accept as valid medical testimony, given by students just out of college, respecting the extension of sick leave of Indian Officials on British furlough, should officially announce that such certificates for State purposes in India are to be monopolised by Presidency Surgeons and forthwith publish a list describing those persons, who cannot obtain casual leave or furlough for ill health without producing a medical certificate signed by a Presidency Surgeon; but which list unfortunately embraces 40% of the official world, 44 of whom have hitherto had their own private family physicians who were lawfully empowered to place them on the sick list, excuse them from duty or recommend them furlough when absolutely necessary to do so.

Not very long ago, when we wrote the Government on this subject, we were informed that no rule obtained against the acceptance of private practitioners' medical certificates as evidence of fitness, and that there was no reason why they should require counter-signature by Presidency Surgeons, no matter whether the party producing such a certificate was a Government servant or not. This notification of the Bengal Government practically vitiated the significance of

Secretary made us, for it was up into the Presidency Surgeon's case-book every one of the officials of the Law Office, and disparages the medical diploma: it has itself granted to qualified students and deliberately robbing the private practitioner of his acknowledged rights defends him of the very advantages truly assured him when accepting his fees for tuition.

We do not pretend to guess the motives prompting or the official under-current that urged or compelled the Lieutenant-Governor to publish this "Hat of State monopoly" at the very time when friction and bitterness were very high indeed between the official and non-official; but we know and feel that this notification seriously affects the private medical practitioner; for it as good as plainly tells him "Starve! You feed starve or commit suicide, for all we care, so long as we secure our taxes and your tuition money, the Municipality their license fees, and our doctors the whole of the private practice"; for does it not follow that if the Presidency Surgeon is compelled to treat him gratuitously and mendicantly for a paltry fee of Rs. 4, *anous propre*, gratitude, or whatever one may like to call the feeling, will suggest the propriety, or return compliment from the official husband of engaging the *cas* physician for the whole family and dismissing the private practitioner who hitherto ministered to the illness of himself or his wife or his children?

Surely the Government might wisely retract this notification and thus remove the unjust and undeserving stigma it implies to private practitioners; for there are laws already extant to render it powerful enough to *severely* punish any delinquent, who exposes himself to the charge of dishonestly granting a medical certificate and a deterrent influence could easily be exerted against recurrence by gasetting any offender (official or non-official) and totally excluding him from future granting of such certificates.

ETHICS OF MEDICAL CERTIFICATES IN CROWN CASES.

So, after all the row, fuss and unnecessary insults hurled at the certificates of civil medical practitioners, the Sessions Court has quashed the conviction obtained at the Sessions Police Court against JOHN E. CROFT for the alleged illicit manufacture of brandy and whisky; because the *oral* evidence tendered by the Chemical Examiner to Government not only materially differed from the *written* testimony submitted by that officer on the same subject, but also contradicted the story of the prosecution.

It is seldom indeed that a case before the law courts has been characterised with the inconsistencies peculiar to this one and its curious phases:—(1) The defendant, CROFT, who was a chronic rheumatic, had a sudden return of his gout and consulted DR. J. B. WALLACE, who certified to that effect, but the Magistrate refused to accept the certificate on the plea that DR. WALLACE was not a Presidency Surgeon. (2) The Secretary to the Bengal Government wrote to the effect that the Magistrate was wrong in this instance. (3) A similar certificate signed by the Coroner, DR. E. W. CHAMBERS, met a like reception, and a warrant was issued for the arrest of the bed-ridden man, MR. CROFT. (4) The prosecution closed its case and rejected the Chemical Examiner's certificate, but as soon as the defence made a clean fight towards victory, the report of the Chemical Examiner was rushed in as evidence against the defendant, who was *denied* the privilege of cross-examination. (5) Objections were raised by the prosecution were immediately recorded, but those of the defence were over-ruled. No matter of how vital import. (6) Surgeon-Captain J. F. EVANS' report was accepted as evidence for the prosecution *without* cross-examination; but when he was summoned the Magistrate held that he was a witness for the defence, who could only examine DR. EVANS

in chief, while the prosecution could cross-examine him if it liked to do so. (Y) As the report of the Chemical Examiner was unique in respect of being qualitative instead of quantitative Dr. BOOTH & DREW was engaged to instruct Counsel for the defence, but the prosecution objected strongly to this proceeding, and after considerable argument their objection was over-ruled with the proviso that the Chemical Examiner was not to be questioned on the weak points of his report. (Z) Though the evidence against him was completely rebutted Mr. GUYOT was convicted and fined heavily; but the Sessions Court has quashed the conviction and remitted the fine.

KALA AZAR IN ASSAM.

COMPARING results obtained by actual research made by himself against the causation hypotheses started by the Sanitary Commissioner for Assam concerning this mysterious but highly fatal disease, Dr. J. DODDS-PRICE advances sound reasons against malaria or ancylostomiasis acting as the exciting cause; because (1) cases of *kala azar* run their entire course without a single worm being discovered in the motions during life or in the intestines after death, and (2) the disease not only completely resists all antimalarial treatment, but also is distinctly contagious, which (latter) malaria is not. It is possible, thinks he for biology and the microscope to at some future time afford a strong clue to the cause, cure and prophylaxis of *kala azar*, but, so far, morbid anatomy reveals next to nothing beyond serous infiltration in pleural, pericardial and abdominal cavities and an enlargement of the liver (varying in extent) with a toughening and increment of the fibrous tissues. Pathology also is indefinite, and in many instances the patient does not know he is as ill as he really is; for he can enjoy and digest his food and will tell you that he has neither pain nor fever, only a feeling of extreme lassitude and "want of go" which make the lightest work impossible, yet the thermometer will register 103°F. Then the disease progresses rapidly, digestion and appetite fail, *cancerum oris* or epistaxis may come in as complications with anemia and cedema, bowel complications supervene rapidly and dysentery or diarrhoea usually terminates the scene; while in those cases, who have accidentally been snatched from the jaws of death, the constitution suffers so severe a shock that they suffer from general debility for a long time after convalescence.

VENEREAL DISEASE IN THE NAVY.

WHENEVER the necessity has been urged for re-instating the Contagious Diseases Act, it has been met with angry roars of disapproval, on the main plea that it demoralised women whose virtue was public property and their modesty an abstract quality. When the C. D. Act was in force, the spread of syphilis was severely controlled, as the heavy penalties, inflicted on the diseased, who plied their trade before they were properly well, had a strong deterrent influence; but since the repeal of the Act syphilis has simply run riot, and, though no correct statistics are forthcoming from the Mercantile Marine, the report of the Director-General of the Medical Department of the English Navy tells a truly terrible tale for last year (1894) when five men died and 9,321 men were incapacitated from work by reason of syphilis and gonorrhoea thus occasioning a loss to the Navy of 282,171 working days. Of those laid up 8,106 had primary syphilis and 1,593 secondary syphilis and 4,823 suffered badly from gonorrhoea and its sequelae. Appalling as these figures seem, they are really weak under the mark as about 35 to 45 per cent. of the afflicted are either ashamed or afraid to report "sick" and treat themselves secretly.

DUFFERIN FUND SCHOLARSHIPS.

THE Honorary Secretary to the Committee of Dufferin's Fund is calling for candidates for admission to the Apothecary scholarships of Rs. 25 per annum. The conditions required

are that the girls must have passed either the intermediate or the higher examination for women, and are prepared to serve for five years after qualification, with an alternative penalty of refunding scholarships drawn, plus 25 per cent. The advantages offered are permanent employment, sound medical education and a salary on the same scale as that of Civil Apothecaries. Applications must be forwarded to Surgeon-Major W. B. Browning at Government House, Ootacamund, Mysore, before the 8th instant.

A FRENCH SCHEDULE OF FEES.

WHEN France does anything, she does it with a vengeance or not at all. To obviate quarrels with the doctors' tariff the department of Yonne has prescribed the following fees:—1 franc for drawing a tooth, opening an abscess, or giving a hypodermic injection; 2 francs for applying a speculum, reducing a hernia by taxis, or applying a caustic; 3 francs for tapping a hydrocele, reducing a phimosia or setting a broken clavicle; 5 francs for circumcision, setting a fracture of the lower jaw, arm, forearm, leg, fibula, femur, administering chloroform, or reducing a dislocation of the elbow, shoulder, ankle or knee; 10 francs for removing a placenta, turning a foetus, applying the forceps, or reducing a dislocation of the femur and 30 francs for tracheotomy or amputating a limb. Calculated into Indian currency these fees range from 11 annas to 20 rupees and are not likely to find favor among physicians, whose minimum charge is Rs. 10 (i.e., 24 francs) for a consultation and Rs. 150 (i.e., 219 francs) for an ordinary confinement.

THE PHYSICIAN AS A CITIZEN.

FOR many and varied reasons there has, till recent years, been a tendency, on the part of physicians, to avoid all other than medical matters, instead of being well to the front in promoting improvements to advance the general civic welfare, educationally, politically, socially and otherwise. This is to be regretted as no one can be better fitted than the physician to grapple with the proper method to study or remedy social ills; for his education and his work ought to reveal to him the hidden springs of human action by bringing him in contact with the daily life of all classes of the community and that very medical training, that urges him to look closely into the cause and effects of disease and suggest their amelioration or removal in the individual, teaches him the right way to go about the treatment of the community, which is merely a larger organism.

DEATH IS PAINLESS.

MAN, but to live a spell, extend his race and die was born, and in this respect Nature built him no better than the rest of animal creation, yet from the pulpit and from sombre lips are daily sounded the alarm of the terrible death struggles of those who have not lived religious lives; but DR. CYRUS EDISON brings forward overwhelming facts and logical conclusions proving that if these pictures are supposed to be taken at the moment of death, they are utterly false as (homicide, murders, suicides and sudden or violent death excepted) several hours before final dissolution, of 99½ of every 100 human beings, a merciful unconsciousness sets in, dwindling charity, love, sympathy, majesty of intellect and pride into nothingness, as without a pang or struggle that mysterious force, we call life, slowly ebbs away from its last citadel the heart making "what is" become "what was"—This then is death.

A FAST BOY.

In the year 1729, says *Good Health*, was recorded by the French Academy a case of a boy who at the age of six years attained 5 feet 6 inches in height; grew a full beard and was able to lift a bag of grain weighing 200 lbs. Two years later he became grey. At ten his teeth fell out, his hands were palsied and he tottered like a man of sixty-two years; later he died with all the signs of old age.

INDIAN MEDICAL PROVIDENT FUND.

The following have sent in their names as willing to join the above Fund:—Asst. Surgs. W. J. Montgomery, Basim, Bano, J. H. Bodricks, Alipur; J. R. Machado, Poona; H. Dalby and W. J. Marshall, Darjiling; J. E. Heppollette, Pachmar; W. Heathcock, Dagbhai; E. W. Fraser, Lucknow; H. V. Dewey, Jalala; S. Killoway, Mooltan; H. D. Pant Ganda; Tim Baptist, Ferozpor; J. G. Fleming, Suri; Mr J. Williamson, C.M.S., Visanagram; T. A. Ambrose Pillay, C.M.S., St. Thomas' Mount, Madras; E. Reuben, C.M.S., Mahud, Colaba; M. M. Arasthunkar, C.M.S., Merta, Marwar; C. Senkelchand, C.M.S., Jalul; C. Vedyantaya, C.M.S., Ambarasodiam, Tinnevely; H. D. Pantalu, C.M.S., Thanawadi; P. S. Jesudasan, Kulital; G. C. Das, C.M.S., Sipaghur; C. B. N. Rao, C.M.S., Hormali; S. S. Budin, C.M.S., Sukkur; S. K. Naidu Bhimavaram, Godavery District; Dr. George E. Claxton, L.R.C.P. & S., Nainital; Dr. H. C. Banerji, Tharawaddi District; Dr. Ed. L. Chalke, M.D., Chatrapur, Gunjam District; Asst. Surgn. W. Fullam, Peshawar; Jai Kishan Das, L.M.S., Kulu; Dr. P. C. Ghose, Arakan Hill Tracts; Dr. B. P. Chatterji, Khumbhir; Mr. Bhooraya Jullaya, C.M.S., Goona; Asst. Surgns. M. E. Mungavin, Darjiling; E. J. Greson, Cherat. This makes a total of 65 applicants. We need 35 more to complete the 100. See page 183 of our issue for full particulars, and let all interested send in their names without delay.

AN UNJUSTIFIABLE JOB.

OUR contemporary—*Pioneer*—is dissatisfied at Dr. DYSON being appointed Sanitary Commissioner of Bengal; characterising it as an "unjustifiable job;" and pointing out that Dr. DYSON is no doubt energetic, capable, and popular, but that Surgeon-Major LAWRENCE WADDELL has better claims. After giving an account of the latter's professional career and attainments, that paper remarks that Dr. DYSON has not a tithe of Dr. WADDELL's knowledge or experience, and has not yet shown any talent for original research. One or two such blunders will go a long way towards producing widespread dissatisfaction in the Medical Service.

MEDICAL HEROISM IN THE CHINO-JAPANESE WAR.

THE *Broad Arrow* speaks in glowing terms of the unflinching courage shown by the Japanese Red Cross men who were always "well to the front" with stretchers and first-aid appliances for their comrades and, in spite of the withering fire from the enemies' guns, did not hesitate a moment on their errand of mercy, but went about the battle field, picking up the dying and wounded, as calmly and stolidly as if they were on the parade ground or under review-inspection.

A FEMALE ARMY-SURGEON.

The *Progressive Medicalist* revives the story of a woman doctor, in disguise, in the British Army, some 40 years back. Scores of folk out here remember the brilliant Surgeon Macleod, who was kind, grave and well up to his work but very reserved. This reserve so annoyed a brother officer that he twitted the doctor with living like a woman and got a slap upon the face in response. A duel ensued in which Surgeon Macleod killed his opponent and almost immediately resigning his post left India for England where he died, after several years, and it was only then discovered that Surgeon Macleod was a woman and a direct descendant of one of the oldest families of Great Britain.

GRATIS ATTENDANCE ON DOCTORS' FAMILIES.

The following is the more essential part of the rule relating to the gratuitous professional services to the faculty, which has a direct bearing on the case referred to: "All legitimate practitioners of medicine, their wives and children, while under the paternal care, are entitled (not as a matter

of right, but) by professional courtesy to the gratuitous and gratuitous services—railway and like expenses—except—of the faculty, resident in their immediate or near neighbourhood, whose assistance may be desired."—Code, Chap. II, Sect. 2, Rule 1.

SHORT ITEMS.

The winter session of the Madras Medical College opens to-day but DR. MAITLAND, the Principal, has issued a *casco* that, except he be disfigured with pits and produce a certificate declaring that he had had smallpox after he was ten years old, no new student will be allowed to enter the curriculum till he can produce satisfactory certificates of vaccination and re-vaccination.

Referring to our remarks on the suggestion of some service man in London to appoint an I.M.S. officer on the India Office Board as its Sanitary Adviser the *Englishman* says:—"At the risk of being accused of impertinent curiosity we venture to ask to what degree India could expect to benefit from such an addition to the already overgrown body of officials in London."

Authentic copies of Mr. Ernest Hart's address on Indian sanitation have been supplied by *special request* to the India Office in London. Though it might seem a wild expectation, still it is to be earnestly hoped that official notice will be taken of the somewhat trenchant criticisms on India's sanitary needs and the placing of the public medical services on a rational basis.

The William F. Jenks Memorial Prize of \$500 has been awarded to Dr. A. Brothers, of New York, for the best essay on "Infant Mortality during Labor, and its Prevention." The writers of the unsuccessful essays can have them returned to any address they may name by sending to Dr. Horace V. Evans, College of Physicians, Philadelphia, U. S. A.

A native paper in Calcutta writes:—"Nothing unites the youth of the country for physical labor so much as the education they receive in our universities. The banking after service is the bane of national progress, and nothing will check the poverty of the country unless the minds of the people are directed to nobler schemes of life."

As the result of the new system of sewerage in Rangoon, Dr. Sutherland, the Medical Officer of Health, reports that in the opening year 1890, the death-rate in the Tarokten and Sule divisions exceeded that of the whole area of the town, whilst in 1894 fell to less than for the whole area. Comments are superfluous.

The new Medical College building in Calcutta promises to be ready in time for the cold season's dissecting classes. The dissecting room will be a very large hall, with a well lighted and ventilated gallery. The rooms will be lined with glazed tiles (white), and have a white marble flooring.

It is significant to notice that the disappearance of the dysentery epidemic in the Sussex Regiment at Dum-Dum has been simultaneous with the abolition of the filters, previously in use by the men, and the introduction of a system of boiling the whole of the drinking water.

The Secretary of State has been asked to send out five lady nurses in the places of those retiring and to fill one vacancy. Fourteen lady nurses are desirous of extending their services for another five years, but stipulate for furlough, first, for various periods which the Government of India decides to allow.

Surgeon Captain P. Rebb, R.A.M.C., has taken 3 months' leave and left Bombay on 21st ultimo.

The annual returns for all India showing the mortality from wild beasts and snakes show, practically the same figures as in 1922, being 2,692 in 1924 as against 2,604 in the previous year from wild beasts, and 21,235 against 21,515 for snakes.

The sales portion of £100 per annum allotted to the Madras Medical Establishment for the year 1895-96, has been conferred on Dr. A. L. Hackett, lately retired, with effect from the 4th May 1925.

Though cholera has abated at Bangalore, the Government of India have appointed Surgeon-Major D. Rose to investigate and report upon the cause of the outbreak.

The Health Officer of Calcutta states that the health of the town is fast approaching the state when Calcutta possessed no drainage.

Mr. W. J. Lubeck of Madras has passed the L.S.A. London.

Current Medical Literature.

MEDICINE.

The Influence of Alcohol on Sexual Perversions, Epilepsy, and other Psychological Anomalies.

DR. FOREL calls attention to the fact that the inordinate use of alcoholic beverages not only leads to the development of the ordinary alcoholic psychoses, especially delirium tremens, but it also plays a prominent role in psycho-pathology in two different ways: Firstly, the hereditary pathological predisposition of certain persons is such that they cannot indulge in alcohol moderately, but become dipsomaniacs at once, if they do not abstain all their lives. Secondly, alcoholic intoxication either stimulates or develops directly any latent psycho-pathological germs that might otherwise have remained latent. In the current casuistic of sexual perversions the principal factors enumerated are congenital and acquired dispositions, acquired nervous or mental disorders, and, in some cases, bad habits. There is no mention of alcohol as a causative factor. FOREL observed cases in which the use—or abuse—of alcohol was a most prominent feature, and enumerates diverse illustrative histories. It is an established fact that epileptics stand alcohol very badly, and when intoxicated are especially dangerous. There is also an alcoholic epilepsy, the subjects having fits only when intoxicated. FOREL also alludes to the "pathological" intoxications, followed by amnesia, and concludes that nearly every psychosis is aggravated by the use of alcohol. Other psychoses which are either caused or kept up by alcohol are, for instance, alcoholic mania, melancholia, pseudo-paralysis, incurable secondary dementia, acute and chronic hallucinatory folly, etc. FOREL observed many cases cured by abstinence, and considers indulgence one of the greatest obstacles in the radical cure of morphino-mania. He had always observed that the excitement of the insane in asylums was always greater after entertainments at which wine or beer were served. At Burghell, of which FOREL is Director, alcoholic beverages have been substituted by milk and lemonade. He commends following the example of the London asylums and that of Knapelin, in Heidelberg, by prohibiting the use of alcoholics.—*Jour. of Nerv. and Ment. Dis.*

Displacement of the Liver.

J. E. GRAHAM, of Toronto, has a paper on this subject in the *Canadian Practitioner* for June. He states that displacement of the liver may occur from influences outside the liver and its attachments, such as tumors, abscesses, and

the like, as well as from displacing or compressing causes, such as length of the ligaments, ribs, and spine. The displacement is not uncommon in women with obstetrical conditions. They have borne many children. A distinction is to be made between floating liver and merely movable liver. The latter reports the case of a woman, aged 22, who had twelfth children, and presented cyanosis, dyspnea, dilatation of the right heart, and emphysema. The liver was displaced downwards, but could be replaced when the patient assumed the recumbent posture, and could be retained in place by the use of a bandage. In a second case, that of a man aged 27, the liver was displaced by a subphrenic abscess. There existed also pyloric obstruction and gastritis. The liver lay obliquely in front of the stomach. In a third case, in a boy, the front wheel of a waggon had passed over the trunk, fracturing the seventh and eighth ribs. For a time a considerable area of dulness was found upon the left side, while the normal area of hepatic dulness could not be detected, so that the question arose whether the liver was originally displaced and an inflammatory process had taken place in the right hypochondrium, or if the liver was merely hidden under the diaphragm, and an inflammatory process had taken place about the spleen. The paper contained a tabulated statement of 30 published cases of displacement of the liver.—*B. M. J.*

The Etiology of Pneumonia.

AN esteemed correspondent, who has, he tells us been in practice for upwards of fifty years, thinks that the key to pneumonia, bronchitis, and other internal inflammations is not to be found in the infection by specific germs, but rather in autogenous poisoning. He points out, for example, that pneumonia is often secondary to the specific fevers, and that bronchitis may be one of the earliest manifestations of such a fever. But apparently he thinks a greater share in the production of these inflammatory disorders is taken by depraved blood states due to defective digestion or metabolism, and affirms that the onset of pneumonia is paralleled by the equally sudden and familiar attack of arthritis characteristic of acute gout. In other words, he adopts a humoralist pathology in contradistinction to prevalent bacteriological doctrine. In this respect he would find himself in line with advocates of uric acid retention as the efficient cause of a vast number of internal diseases. Nor would we deny that there is much to be said in favor of such ideas, which go far towards explaining the occurrence of secondary pneumonia, pericarditis and the like. On the other hand, the adoption of the belief in the necessity of external infection would relegate all these blood states to the region of secondary rather than essential causes. It is not difficult to conceive that, given certain states of nutrition or rather demnutrition, the tissues are rendered more prone to attack by specific agencies such as the pneumococcus.—*Lancet.*

Neurosthenia and its Treatment.

SALLARD makes five clinical classes of this affection according as it is specially connected with the alimentary, cardiac, cerebral, genital or optical system. The diagnosis is more or less difficult owing to the inconstancy and variability of the symptoms, chief among which are: sensation of weight in head, mental depression, muscular weakness, constriction at nape of neck, pain in the back with tender joints, and dyspepsia. By way of treatment he suggests rest, careful hygiene and hydrotherapy. Vigorous use is made of electro-therapeutics and baths on proper application of the agent, which undergoes considerable change, the acidity increasing and a large amount of the fatty acid, lactic acid, and other incomplete oxidized products; but the urea, ure-

and the sympathetic system are decreased. G. H. KANAK, M.D., London, reports that as the result of localized toxic infections in the vasomotor system tenderness of the limbs, and agreeing strongly in favor of thermotherapy, is the production of hyperemia of the skin by artificial means such as heat causes a sudden efflux of blood to the skin with increased circulation in both the tissues and nerve endings. Consequently the exposure of the naked body, for a few minutes, to a temperature of about 85°F produces a vigorous reaction and exhilaration.

Early Diagnosis of Diabetes.

As treatment in the early stages of diabetes offers considerable hopes, if not actual certainty, of recovery Von Noorden, who depends greatly on the diagnostic value of alimentary glycosuria, views gouty and adipose subjects as more predisposed than any one else to diabetes, and declares that there is no wisdom in delaying treatment until the diagnosis is made by the accidental discovery of sugar in the urine, when perhaps the disease may have too far advanced. He points out that there is nothing more simple than the grape-sugar test which should be tried in the adipose and gouty (especially when there is a family history of diabetes) It is his firm conviction that adiposity is frequently an early symptom of diabetes, for though no sugar can be found in the urine of adipose individuals when fed upon food, consisting largely of carbohydrates, still, as soon as pure grape-sugar was eaten by those predisposed to, or having the slightest trace of, diabetes, glycosuria was manifested.

The Diagnosis of Intestinal Rupture.

DR. BERNY discusses the question of intestinal rupture from the diagnostic point of view, emphasizing not only the difficulty of establishing the certainty of a lesion of the gut-wall, but also the importance of so doing in order to enable the surgeon to undertake an early laparotomy. The effects of a severe contusion are very similar to those produced by rupture, but the author points out that while vomiting is present in both cases, its nature varies so much as to constitute it an important element in diagnosis. In simple cases of shock the vomiting is reflex in character, and, although repeated two or three times, is never very serious. On the other hand, where the intestine is ruptured, it is due to the extravasation of the gaseous and fluid contents of the bowel into the peritoneal cavity, and is then always of a persistent and intractable character. Berny recent investigations are added in which this opinion has been strikingly confirmed. —*New York Med. Journ.*

SURGERY.

Massage in Fractures.

Bump leads for the more extended use of massage and early motion in the treatment of fractures, in order to prevent the atrophy of muscles and the stiffness of joints so often observed under the old-established methods of complete immobilization. In fractures of the shafts of long bones immobilization of from ten to twenty days, according to the size of the bone, is necessary in order to ensure the presence of sufficient callus, and then massage, followed by active and passive motion of the limb, should be commenced as soon as motion is at all firm. In fractures, involving joints, Bump recommends preliminary massage, then immobilization for four to eight days, finishing with daily massage and passive movements. In fractures of the pelvis and cranium he begins massage and passive movements. The method is recommended by great

celebrity, unusual mobility, or septic infection. In 1895 we agree with Bump's method; so doubt, as every case managed and passive motion is too much neglected or not commenced early enough, especially in fractures in which joints are involved. In fractures of olecranon or patella we think he would be a very bold (and somewhat risky) man who started "straight away" with movements. —*Med. Times and Hosp. Gaz.*

Iodoform Injections in Joint Disease.

FERRAS reports the case of a man, aged 37, who after a long walk first noticed pain in the right knee, which was uniformly enlarged, red, and tender, and contained fluid. The joint was insensate, and a considerable quantity of fluid was let out. Two or three weeks after this, during which time the joint went on well, a small abscess formed in the upper third of the tibia; this was scraped. A similar purulent focus also appeared in the shaft of the tibia. The knee-joint became worse. The author then tried intra-articular injections of iodoform emulsion in sterilized glycerine (1-10) at intervals of twenty to twenty-five days. After each injection there was fever of maximum grade on the second or third day. The tubercle bacilli were found in the joint secretion. Slight improvement followed the injections, which were used five times, but the patient not being satisfied, resection of joint was finally done. It was then seen that the cavity was full of a mass of adipomucous-fibrous connective tissue, the caseous substance being almost all gone, the osseous foci cured or in process of cure, and the tuberculous nodules undergoing fibrous change. No bacilli were now to be found. Probably the iodoform acts by exciting a reactive inflammatory process with formation of new connective tissue.

Death by Lightning.

DURCK describes the morbid anatomy in the case of a man struck dead by lightning. There was an abrasion of the skin on the left side of the forehead where the current entered. There were extensive hemorrhages over the left parietal, frontal, and temporal lobes. Fluid blood was found in the heart and veins. There was hyperemia of all the abdominal organs and chronic enlargement of the spleen probably malarial in origin. The brain substance was very soft, but without edema. The author thus summarizes the results that have been found in recorded cases of death by lightning or by the electric current. (1) The blood is dark, in coagulating power, which latter may even be entirely lost. (2) Circumscribed extensive hemorrhages due to the tearing of vessels in the course of the current are generally present. (3) There is frequently a destruction of parts of organs. (4) The site of the entrance and exit of the current is usually marked by superficial or even deep wounds, resembling burns. As regards the figures on the surface of the body further investigation is needed to establish their direct relation to the electric current. —*B. M. J.*

Suprapubic Cystostomy for incurable Vesico-vaginal Fistula.

DR. EMER reports a case of incurable aggravated vesico-vaginal fistula in which the destruction of the parts being so great that it was impossible to construct a new sphincter in the usual manner, he performed suprapubic cystostomy, using the edges of the divided skin and of the opening into the bladder to form (by extending them together) a four-angled artificial suprapubic urethra, through which the urine passed, and its full retentive power was not gained, the opening was covered with a trans arrangement carrying a weak tube, which the overflow of the urine passed and the patient was kept dry.

Serious Effects of Serpent Venom absorbed through a Wound of the Mouth.

Dr. HIRSCHMORN has published the case of a man who suffered from the effects of serpent venom after sucking the wound of a girl who had been bitten by a viper. The girl recovered within a week, but the man had a painful swelling of the left submaxillary region extending to the neck, the chest, and the upper extremity, and he suffered also from vertigo, inability to stand, and clonic and tonic spasms of the left side of the body. The seizures lasted from half an hour to three hours, and after they ceased the skin assumed a reddish color with blotches elevated above the general level. This exanthema resembled urticaria and caused a sensation of itching, disappearing after two hours. The spasms and the aura ushering in the paroxysms suggested epilepsy, but there was no unconsciousness. Examination showed that the inoculation had taken place through the gum, which was lacerated in consequence of the extraction of a tooth. Dr. HIRSCHMORN supposed these paroxysms to be toxicemic; bromide of potassium was administered, and the patient is at present free from them.

Double Castration.

The results of 111 such operations performed for senile enlargement of the prostate are summarised by Dr. J. WILLIAM WHITE who declares that theoretical objections fade under clinical experience, and quotes the following percentages:—mortality 18, uremia 7.1, recovery, with rapid atrophy of enlargement 87.2, disappearance or lessening greatly of long-standing cystitis 52, return of the vesical contractility 66, return to normal of local abnormalities 46.4.

Spleen extirpated for Echinococcus cyst.

A woman aged 85 had a tumour as large as a child's head in the left hypochondrium, but freely movable and little sensible. HAHN cut down on it to find a thin bluish-black capsule, but speckled with yellowish-white spots and closely impinging the spleen, with which it was bodily excised and the splenic pedicle doubly ligated. There were no complications, and patient made a speedy and complete recovery.

Palliative treatment of jaundice due to malignant obstruction.

The most perfect cases for operation are those in which the lesion is confined to the head of the pancreas, and a distended gall bladder would warrant operation by tapping if the obstruction were below the cystic duct; but if the obstruction were above this point, the gastric symptoms would be best relieved by medicinal treatment and removal of the jaundice. RUSSELL, however, relates a case where a woman, of 85, had intense jaundice and profound cholemia, but as her symptoms partially contra-indicated it, she declined surgical aid, till it was too late, and died in 30 hours after she was tapped. The post-mortem disclosed primary carcinoma of the head of the pancreas, without secondary involvement.

OBSTETRICS AND GYNECOLOGY.

What to do and what not to do is the question.

No branch of a physician's practice requires more self-poise, and where so many complications arise, commanding our sympathy and demanding our skill, as that of obstetrics, and when disease and death follow a normal case of labour the cause can be traced to none other than to ignorance or mismanagement.

With these preliminary remarks, I now advance a few

Algorithms relating to Obstetrics.

1. Examine the urine a week or so before the expected time of delivery. Albumen need not occur, albuminuria present in large quantity, in which case the woman should be restricted to milk diet, 1-10 grains of sulphate of potash four times a day, and the bowels kept open with cream of tartar, the object being of course to relieve congestion of the renal veins.
2. Make no digital examination without first cleansing the hands and nails, together with the external genitalia, with a solution of bichloride of mercury (1 to 2,000) and ethereal soap.
3. Empty the rectum thoroughly with an injection of warm water.
4. Make as few examinations as possible during progress of labor and each time dip the hand first in antiseptic solution.
5. If presenting part emerges slowly from the womb, do not allow your impatience to so get the better of your judgment as to induce you to "assist nature" by pulling upon the os. Probably all the deep pathological tears, calling for surgical interference, found on the right and upper anterior sides of the cervix, are caused by the finger of the accoucheur.
6. If pains are sluggish, change the position of the patient.
7. Do not rupture the "bag of waters" too soon, as it, when intact, favors the posterior rotation of the face.
8. Should a posterior rotation of the occiput occur, and nature fail after a reasonable length of time to effect a delivery, apply the forceps and turn the occiput to the front by rotating either to the right or left, as the position of the babe would indicate. This manoeuvre of the forceps can be executed without danger if care be exercised, turning the head not more than a quarter of a circle at a time, then pausing a moment for the shoulders to follow. After this is accomplished the instruments should be removed and reapplied.
9. In making traction on the child's head with the forceps, unlock them about every thirty seconds, else the engorgement produced by continued pressure of the instruments might cause a hæmatoma of the brain or dura.
10. To prevent a rupture of the perineum.

When the occupant is emerging from the vulva, remove the right hand from the forceps and with it support the soft parts, while with the left you continue slight traction upward until the bridge of the nose reaches the anterior border of the perineum, when the instruments are quickly removed. Now, in order to avoid a rupture, especially if an expulsive effort is being made, hold the head in statu quo until a relaxation takes place; then with the thumb and first two fingers of the right hand, push the perineum down and under the chin, allowing it to rest on the palmar surface of the fingers. The next pain will expel the head, which is grasped by both hands and pulled upward, delivering the under shoulder first.

11. Should a rupture occur, repair the injury at once, using the large iron-dyed silk.

12. Do not become impatient if the placenta does not follow quickly, but wait, say a half or even an hour, before an attempted forcible delivery is made. Should, however, a violent hæmorrhage occur, empty the uterus at once, by disinfecting the hand, introducing it into the womb, detaching the placenta, and allowing it and the hand to be forced out together.

13. The source of uterine hæmorrhage following labor arises almost always from the open and now no longer useful utero-placental vessels. Nature, usually, closes them out of a hundred, prevents hæmorrhage arising from this source by filling up these vessels with clots and placing over their mouths with coagulated blood. Therefore

14. *Massage, the Swedish method*, and for two reasons: First, that the act of squeezing out the placenta discharges at the same time from the arterioles and vessels this plastic substance, forming a mass of blood to follow the non-squeeze of the hand, causing in a probability a hemorrhage instead of preventing it. The second reason is, that a hemorrhage following after this method of forcible expulsion, necessitating, as it usually does, a constant hand pressure over the uterus for half an hour or more, while it may not prevent absolutely the reformation of nature's cement, would cause paralysis of the contractile fibres of the womb, rendering them incapable of responding to the stimulus of ergot or to anything else.

15. For these passive hemorrhages, where so soon as the hand is removed the hemorrhage goes on, the writer relies on 1 teaspoonful of laudanum rather than 2 or 3 of ergot.

16. After the birth of the child, gently knead the abdomen with the finger tips of the left hand, using barely force enough to feel the uterus beneath. This gentle friction excites uterine contraction far better than rough massage, expelling the placenta almost as quickly and is rarely, if ever, followed by unpleasant hemorrhages or after-pains. This slight finger pressure should be continued a short time after the placenta is expelled.

17. In early abortions, before atrophy of the blood-vessels of the mucosa takes place, the hemorrhage comes greatly from the engorged mucous membrane instead of entirely from the placental surface, as in full term. To stop it, do not use ergot or compression, but approximate the inner surfaces by removing the decidua with the placental forceps or the dull curette. This is to be followed by a hot antiseptic (preferably carbolic acid) intra-uterine douche.

18. Have the vulva kept well covered with sublimated cotton to catch the lochia and prevent infection; and, in addition, if a clean and competent nurse is in attendance, order given night and morning for five days, warm antiseptic vaginal douches.

19. Wash the babe's eyes the moment it is born, and in dressing the navel use boric cotton saturated with glycerin.

20. Restrict the diet the first three days only, after which have the bowels moved either by enema or the compound licorice powder. (If there is much flatus, use instead a full dose of castor oil and turpentine).

21. Keep the woman in bed two weeks, if possible, and the first four days give a capsule containing $\frac{1}{2}$ grain of ergotin and $\frac{1}{4}$ grains of quinine, morning, noon and night. This tends to prevent fever and hastens the process of involution.

22. If surgery is your speciality, and you are called to a case of confinement, use extra precautions in cleansing the hands and nails; in fact, it would be wise, if your practice in surgery is extensive, to let obstetrics alone.—*Gailard's Med. Journal*.

Obstetrical Brevities.

Sudden death due to employment of Sugar of Lead to procure Abortion.—MRS. B. had self-induced abortion fifteen times, successfully, but she tried it once too often and died in the act, without accomplishing her object. DR. PAUL J. HAMPDEN, who made the necropsy, found a 8-weeks embryo, in bed of uterus, with the membranes unruptured and endometrium yellowish white. In the vagina he found a pretty strong solution of lead acetate. As the organs appeared quite healthy and there was no history of heart-disease or disease of any kind, nor was there any sign of any injury to either the generative system or peritoneum, he concludes that death must have been instantaneous, and was due to the shock caused by the violent

MEANS believed in the popular theory that spontaneous rupture of the non-gravid uterus was a mythical apocryphal till he saw two cases, one where rupture occurred because there was haematomata with extreme retroflexion and in the other pyometra made the uterine walls give way. Both patients were successfully relieved by abdominal section.

Lactation Statistics.—Of 326 women, lying-in at the Freiberg Maternity, WISNOW found that during the first fortnight only 33 suckled freely, 44 secreted insufficient milk, and 299 had none at all; while 244 got through nature's requirements. The nipples were imperfect in 49 and swollen in 46 cases. He notes that the development of the nipple bears a direct relation to the milk-secreting power of the breasts, which latter he places in three groups of which he states the percentages to be:—bad 11, medium 21, good 54.

Treatment of foreign Bodies in the Uterus.—As with the exception of POULLEY all authorities are silent on this subject. ALBERTIN explains that foreign bodies may come from within—fetal debris, fibroma, calcified mole, polypus,—or from without—needles, plugs, sponges, catheters, hairpins, pessaries, knitting-pins, candles &c.—as the result of introducing instruments, &c., for the legal or illegal purposes of promoting premature birth and abortion, for therapeutic and surgical purposes of dilatation, cauterisation, replacements, &c. and for masturbation. He advises immediate aseptic removal of the foreign body, rest in the recumbent position for some days, intra-uterine irrigation and absolute cleanliness. If necessary the uterus should be curetted.

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PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

Muscular Energy: Present State of Knowledge in regard to its source.

MANY and varied indeed have been the theories concerning the action of food towards muscular energy, and till very lately LIEBIG taught that as protoids were essential for the growth of living muscle substance, which had the power of liberating their energy, proteins were superior to the fats and carbohydrates, and the greater the amount of proteid matter eaten the greater the growth of the active muscles and the stronger the energy liberating mechanism; but after reviewing the whole of the evidence possible to be obtained, DR. D. NOEL PATON dishes the majority of the theories and, showing that it is *living* (protoplasm) and *not* dead protoids that we have to consider, points out that no matter whether the food be carbohydrates, proteins or fats this *living* protoplasm takes up the dead protoids from it, makes them parts of itself and converts their stored energy *alive* into the kinetic energy of muscular work, while the nitrogen in any excess of proteid, in the food, is rapidly excreted. Still he declares that a great deal of further research is needed before we can positively assert the why, wherefore, and how proteid metabolism actually affects the muscular work of the body.

Immunisation against Cholera.

SQUERNHEIM taking advantage of an epidemic of cholera at Buzeln, near Marburg in the Autumn of 1894, investigated the blood serum of patients convalescent from the disease with regard to its immunising properties. The blood taken from the median vein was kept for twenty-four hours in an ice-chamber, and the serum injected intra-peritoneally into guinea-pigs. Twenty-four hours later the animals were injected also intra-peritoneally with a fatal dose of cholera vibrios. These were of different origin, but in past years were obtained from the Buzeln epidemic. It was found that in the blood of such convalescent patients certain substances are present

which have a specific immunising property against the laboratory cholera of guinea-pigs. The amount and efficacy of these substances are not constant, but show variations bearing some ratio to the severity of the disease.—*B. M. J.*

Microbic Origin of Rickets.

MIRCOLI pleads for the microbic origin of rickets, believing that the disease is caused by the effect of ordinary pyogenic organisms upon the osseous and nervous system. Clinically he finds support for this theory in the fact that rickets develops independently of social condition; frequently begins with eczema, boils, or intestinal catarrh; occasionally; occurs epidemically; and is accompanied by fever, polyarthritic and bone pains, hydrocephalus, marasmus, and paresis of lower extremities. Pyogenic organisms have been found in the bones and central nervous system of rickety children. Experimental injection of pyogens into the bones and epiphyseal cartilages of young rabbits produced common osteomyelitis, but in other cases an osteomyelitis without trace of suppuration, with hypertrophy of the ends of the bones, hypertrophy of cartilages analogous to that of rickets, and marasmus.

Effusion and Absorption.

HAMBURGER points out the part that limitation of absorption plays in the production of passive effusions. The process of absorption is not a vital but a purely physical process; all tissues, living and dead alike, can take up a certain amount of fluid by imbibition either molecular, where the fluid is taken up by a homogeneous mass—for example, gelatine—or capillary, where the fluid is taken up by the pores of a porous mass for example, porcelain, or connective tissue. Given fluid in a pleural cavity, the cement substance between the cells or even the cells themselves, take it up by molecular imbibition; then, by capillary imbibition it is drawn into connective tissue, and thus reaches the lymph stream. This process, however, ceases unless the fluid thus drawn up be quickly taken into the blood stream, and carried away, for a limited quantity of tissue can take up only a limited quantity of fluid at a time. It is well known that quickening of the blood stream favors absorption, and it is the slowing of the blood stream, which by its purely physical effect in limiting absorption is an important factor in the causation of passive effusion.—*Virchow's Archiv.*

Vasomotor Phenomena in Fever.

REVIEWING the work done by many authorities and the theories advanced by others, Professor F. KRAUS concludes (1) elevation of temperature is coincident with diminished heat radiation, which latter is increased to a greater degree by antipyretics than by cold water; (2) during the stage of chill the central temperature is increased, but the peripheral temperature is lowered, the superficial arteries contracted and the skin turgescence diminished, while the venous blood is redder than in the normal state, (3) the vessels alternately contract and dilate; but cutaneous vasomotor reflexes are preserved, (4) the blood plasma and the number of red cells are not modified during fever; (5) toxic agents act upon the vasomotor nervous system and in some peculiar manner influence the thermogenic process and heat radiation.

PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Milk Borne Diseases.

TRACING an epidemic of cholera to its source, W. J. R. SIMPSON found the exciting cause was milk. J. M. COATES drank milk, got cholera, and died. KESSE, HANSEN, CHEW, ADAMS, FORSTH and a host of others have proved a distinct connection of raw milk with anthrax, tuberculosis, ty-

phoid and enteric fever, diarrhoea and dysentery. Dr. H. H. HERRMANN now reports an outbreak of milk-borne subacute enteric fever giving rise to the development of severe enteric in 80 persons, belonging to 12 families in Lancaster. KENWOOD records an unique case where a drink of raw milk gave rise to a peculiar sorethroat, terminating in true diphtheria and becoming the starting point of an epidemic of the latter disease at Finchley; but of so light a type that only one death was registered, and when the milk was boiled before imbibition the disease was stayed. Whether the actual source of the diphtheria KENWOOD would not like to swear, but he opines that the milk caused throat trouble, lowered the resistance of the tissues and laid the foundation for the subsequent diphtheria, and he therefore suggests the desirability of frequent veterinary examination of animals in dairies and cowsheds by some fully competent body.

The Sanitation of a House.

IN the suit of Paulson v. Judge, in the Queen's Bench Division on Saturday, May 18th, the plaintiff's case was that upon the representation of an agent that a furnished house at Sandgate, called Castle Glen, was in a perfectly sanitary condition, he hired it for the benefit of his family in the spring of last year; that immediately after entering into possession some members of his family had scarlatina, his wife had sorethroat, and his servants were also made ill from foul smells coming from the scullery sink and the dampness of the dining room. Evidence in support of the plaintiff's case was given by Dr. PAULSON, Dr. O'HEALE, and others. For the defence it was contended that the house was in a good sanitary condition, and the evidence of Mr. MARK JUDGE (sanitary engineer), was to the effect that the sanitary arrangements were perfect, and that he and his family had resided in the house both immediately before and after Dr. PAULSON, and had not experienced any ill-effects. The jury returned a verdict for the defendant on the claim and also on the counter-claim.—*B. M. J.*

Fees at the Coroner's Courts.

ALTHOUGH she had lain seriously ill from Monday to Saturday, it was only a few hours before her death and when too late for effectual treatment that her husband sent for Dr. W. J. MARCH to attend her. She died early on Sunday morning, and when the doctor was asked for a death certificate, he declined to give one on the plea that he had not seen sufficient of the case to be satisfied as to actual cause of death. A coroner's inquest followed at Bradford and not only did the jury formally register its dissatisfaction of Dr. MARCH, but the coroner, also, made some very nasty remarks about his refusal to grant a medical certificate, as well as spoke lightly of him to the jury and declared that if they wished to cite Dr. MARCH as a witness they could do so, but he would not permit a fee for such attendance at court. Our contemporary, the *Lancet*, rightly waxes wrath at this and argues that if the doctor were subpoenaed to attend court, it is nothing but fair that he should be recompensed for the loss of time and money occasioned by such attendance and a miserable guinea (£1-1-0 or about Rs. 16) is none too much. The medical man is the best judge as to whether, he should or should not grant a certificate of death. It is wrong to coerce him to certify against his conscience or in doubtful deaths, and whatever scientific facts or flaws he may wish to make public concerning an inquest should be made public on oath; but this is no reason why he should do so for nothing. It may be his moral duty to assist a coroner as much as he can if that gentleman is a layman; but the moment that that coroner forgets what becomes a gentleman the doctor's obligation to help him ceases.

Definition of an Habitual Drunkard.

A **RETIRÉE** has been presented to the English House of Lords, saying that any person who has been twice convicted of drunkenness, within two years, shall be defined to be an habitual drunkard, and that any licensed dealer serving or harboring him, after due notice, shall be liable to penalties and forfeiture of license. In South Australia three convictions, within six months, constitute an inebriate an habitual drunkard. An Inebriates' Bill, which was before the late Parliament, but failed to be acted upon before the dissolution, proposed three convictions within twelve months.

The Feeding of Patients.

It is just as well not to ask the patient what he would like to eat. Prepare what seems in the judgment of the nurse to be acceptable and bring it in at the proper time. Give little at one time, remembering that food taken little and often is the best rule during convalescence. Be very careful not to crowd too much on one plate. Simplicity is appreciated by a patient.—*Popular Health Magazine*.

Care of the Teeth.

It should be mentioned, in the interests of antiseptic purity and suffering humanity, that a good stout tooth-brush, plenty of water, and some antiseptic dentifrice, applied morning and night, afford a greater safeguard against many diseases than many people are aware.—*SIMS WOODHEAD*.

THERAPEUTICS AND PHARMACOLOGY.**Therapeutic Brevities.**

To disguise the taste and color of *cod liver oil*, mix 620 grains of the oil with 30 grains of freshly roasted coffee and 1½ of animal charcoal. Put into a stoppered flask, which put for 15 minutes into a water-bath at 140°F, shake occasionally for 2 or 3 days and pass through filter paper. The oil is colorless, limpid, and smells, and tastes strongly of coffee.—*Times and Register*.

ICHTHYOL was used successfully, in 2 to 3 per cent solution, by **SONENBERG** in the treatment of acute *pharyngitis*.

CALCIUM CHLORIDE, in 10 to 15 grain doses every 2 hours, controls *hemoptysis*—**S. SOLIS COHEN**.

NEURASTHENIA may be greatly benefited by giving ½ grain cocaine hydrochlorate and 1½ grains vanilla sugar, 2 or 3 times daily, in a glass of milk.—**GRLEY**.

BROMINE, topically used in 6 per cent. solution, acts as a specific in the early stages of *diphtheria*—**ROBERTSON**.

HOT WATER (as hot as can be borne) poured from a little height on to the back of the head will relieve *occipital neuralgia*.—**W. D. MOAFFEN**.

CELORAL may be disguised in ordinary gaseous (or aerated) lemonade, is the verdict of **DR. HOLLAND**.

CHLORINATED LIME, in the form of liquor caloris chloratæ is highly recommended, in *pruritus ani*, by **ALBERT R. REBERG**, who claims brilliant results, and declares that the itching vanishes, as if by magic, if the parts are washed in the above solution and left undried.

TINCTURE OF CANTHARIDES, given every 8 hours, will remove *incontinence* depending on debility of vesical sphincter, provided that the bladder, kidneys and stomach are free from inflammation.—**HARRIS**.

CALCIUM SULPHIDE, in daily doses of 1 grain, acts as a prophylactic in *influxus*.—**GREENE**.

GLYCOLYTIC FERMENT, prepared from the diastase of malt, is not diuretic, yet it gives marvellous results in the treatment of *diabetes mellitus*; but unfortunately the improvement is only temporary.—**LIPKIN in Rev. Med.**

PHENACETIN, when combined with citrate of caffeine, is far more effective than when used alone for *headache*.—**DR. CATTANACH**.

VALERIANATE of caffeine acts like a charm in *asthma* and hay asthma.—**HUTTON**.

THE nervous headache of brain-workers is probably due to a chemical poison circulating in the blood.—**PROF. BLAKIE**.

TYPHOID FEVER has troubled many minds; but Professor A. J. DOWNES declares that the most successful means of combating it consists in the *continued application of cold* to the abdomen, over the lower coils of the ileum and the beginning of the colon.

PILOCARPINE, hypodermically used in ½ grain doses, helped **WALTER BANN** to cure 40 cases of aggravated *erysipelas* in 3 to 5 days. The very first injection reduces inflammation and promotes convalescence.

CALOMEL fumigation is far superior to antitoxin, in the treatment of croup and diphtheria, thinks **DR. BENJ. ELLSON**.

COPPER-HEAD snakes are as poisonous as rattlesnakes; **DR. J. K. CRISSEL**, writes the *Medical World*, saying that he was called in to see a woman, bitten 4 hours previously by a copper-head on her hand. He ligated the arm above the elbow; freely opened the bite with a lancet, and applied a strong solution of *potassium permanganate* to the wound and all over the hand, as also administered some hypodermically. The woman *completely* recovered in 4 hours.

HIRAM J. COON, M.D., cures *epilepsy* by, three times daily, administering a tablespoonful of *mercuric ammonia* solution, made by filling a half-pint bottle half full of the granular salt and filling the rest of the bottle with water.—*Medical World*.

LOCHIA may be promoted by giving fl. ext. *Jaborandi* ʒi x, every 8 hours or they may be re-established by hot fomentations and putting patient under the influence of ipecac and opium.—**S. B. LITTLEPAGE, M.D.**

CREAM OF TARTAR, locally applied or injected urethrally, gave **DR. OTTERI** marvellous success in the treatment of 280 cases of *gonorrhoea*, buboes, chancres and preputial operations.

COCAINE injections into the testes, thinks **S. E. MCCURLEY, M.D.**, are vastly superior to castration in the treatment of enlarged prostate, as they are rapidly absorbed; atrophy the prostate and terminate the production of spermatozoa, without, however, destroying the power of copulation.

FOLLICULAR TONSILLITIS, gives a deal of trouble and appears as the result of a toxæmia produced by the absorption of accumulated material in the lacunæ, and if these be cleaned out and then have peroxide of hydrogen applied to the cavity, as a *quick* and successful cure is made.—**J. C. HOAG**.

PILOCARPINE, hypodermically in ½ grain, may be regarded a specific in *articular rheumatism*.—**DRAPPIER**.

"**SOLID FOOD**, unless ordered in writing by a legally qualified physician, must not be given to infants under 1 year" rules the new French legislature, which provides heavy penalties for delinquents.—*Medical Herald*.

SPARTEINE SULPHATE, in ½ grain doses, is very satisfactory in *exophthalmic goitre*.—**GAILLARD**.

ASAFOETIDA begun with 1½ grain doses, gradually increased to 10 grains and as gradually decreased, removes the tendency to *habitual abortion*.—**WARMAN**.

CITRIC ACID, is praised by **M. PELLISIER** as a remedy in *Gonorrhoea*.

TARTAR, of the teeth can be readily removed by rubbing the encrusted surfaces with a wooden spatula moistened with *trichloroacetic acid*; but this must be done *carefully* as the acid is a powerful escharotic.—**DR. FIERCE**.

SODIUM MONOSULPHITE, 8 grains (or ʒi ss. gramine) daily, rapidly eliminates lead from the system, is devoid of danger and a panacea in *lead colic*.—*Pharm. Record*.

SODIUM CHLORATE, combined with *Aristol*, has been found valuable in *cancer of the stomach*; but needs to be given in large doses to relieve functional disturbances.—**DR. HUGHARD**.

CORRESPONDENCE.

SIR WILLIAM ROBERTS AND THE
OPIUM QUESTION.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Shortly after I had looked over Sir Wm. Roberts' medical report on the opium habit, I received the *Indian Medical Record* with your editorial in reply.

I need not say that I was delighted to see it. Were it not for the grave problems connected with the subject one would wish to let the matter rest where it is and allow the report die a natural death. I have come across many medical men since coming to the old country, and I found as a result of the Commission that they in many cases had decided for the present to have no views whatever on the subject. The enquiries of the Editor of the *British Medical Journal* and the conclusions of the medical adviser of the Opium Commission had not brought them to any definite position or made them pro-opiumists, but it had set them wondering why such views were possible. There is no question of "Revenue" to bias the mind, and what they would like to know is why the native of India should be so benefitted by a habit hurtful to all who become addicted to it at home, and whether the secret of the difference is in the native or the country.

Your editorial I handed over to a medical brother the same day it arrived, and he returned it and Sir Wm. Roberts' report with the remark that your reply was conclusive.

Anyone reading Sir Wm. Roberts' report cannot fail to see that the facts are arranged to suit his theories. His notes on the opium habit in children are reading of an entertaining but not convincing character.

The theory runs as follows:—"It is difficult to believe that a practice so widely diffused through all grades of society, and carried on under the direct supervision of the vigilant maternal instinct should have maintained itself so long in credit if it were on the whole and to any appreciable extent injurious."

When one recalls all the barbaric practices which for centuries under the sanction of all grades of society and under the direct supervision of not only ignorant mothers but so-called medical men, and when one reads of many of the practices of savage Africa of the present day in connection with women and children which have prevailed for centuries, it is difficult to believe that any medical man would advance such reasons for the purpose of proving a habit to be beneficial.

Because many men partake daily for years of alcoholic liquors, he would be a rash man now-a-days who would base his defence of the alcoholic habit on this statement. Because not so very long ago many mothers dosed their infants with toddy and gin or alcohol in one of its forms, would any one now venture a word in its favor on this premise?

Because it is a widespread practice throughout certain districts in Rajputana, when a child has been ill for a short time to call in a village surgeon who, as I have seen myself, stretches out the child on the ground and with a red hot iron cauterizes it on many spots over the chest and

abdomen, will any medical man, doctor or student, who tortures to be beneficial, and yet the same surgeon and be advanced for this as for the opium habit in children?

Thus the vigilant maternal instinct? That is true, but more slave to custom. And in India, where the vigilant instinct of the young mother is completely subservient to the judgment and leadings of the mother-in-law, in whose house she generally is, and under whose control she mostly lives, the value of the vigilant maternal instinct becomes so merged in the customs of the family handed down from generation to generation as to be practically valueless. Sir Wm. Roberts was ignorant of the Indian family life, and Sir Wm. Roberts formed conclusions where he was not from his ignorance capable of doing so.

He no doubt felt called upon to issue some sort of a report to satisfy the promoters of the Commission; and all will sympathize with him in the difficulties which surrounded his path. Much of the evidence was bewildering even among pro-opiumists the evidence was contradictory and confusing. Yet no one can compare Sir Wm. Roberts' conclusions with the analysis of the medical evidence which formed the basis and supplied the wording of the medical portion of Mr. Wilson's report without at once falling in with the main portions of the medical views advanced in the report of the latter.

As the accredited medical expert of the Opium Commission, it would have been juster to many medical men and to the readers of the report if Sir Wm. Roberts had dispassionately laid down a fair statement of both sides of the case and left the readers to form their own opinion.

The conclusion which comes uppermost is that there is ample room for personal medical work in connection with the opium habit and many points calling for patient accurate investigation.

Yours, &c., WM. HUNTLY, M.A., M.D.

EDINBURGH, 7th September 1895.

:O:

TREATMENT OF LADY DOCTORS IN THE N.W.P.
TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—May I ask your valuable journal to espouse our cause and bring our grievances before those of the public who would feel disposed to render us material assistance and redress.

Not long back a circular was issued to the effect that Lady Doctors and female medical assistants of all grades, working in the Provincial Branches of the Dufferin Hospitals, should in all matters connected with hospital work consider themselves under the supervision and orders of the Civil Surgeon of their respective stations. We do not shrink our duty nor even dream of deviating from this order; but is the authority who issued the circular aware of the grievances and indignities to which female medical help is subjected, and when the hospitals are officially inspected, how is it that not a single question is asked as to whether the lady doctors are themselves comfortable, or not?

I know of one instance, where, for no offence whatever a female Hospital Assistant was scolded, in the presence of her Assistants and medical establishment, by the Civil Surgeon, who, afterwards finding himself in error, apologized to her privately the next day. Is this practice, and one possibly conducive to encouragingness in work?

The Civil Surgeon does practically nothing of the work actually done by the Lady Doctors, as he has to depend for information on his Assistant Surgeon, who in turn looks upon the compounder, who may, or may not, be honest in reporting. Now if the compounder be not on good terms with the female Hospital Assistant, he brings false charges against her, and, if he be (as often happens) a favorite of the Assistant Surgeon, a bad report goes in against her to the Civil Surgeon, who immediately comes down on her and she has to bear her scolding weekly, if she does not wish to risk her appointment, which is the mainstay of herself and family.

Suppose, however, that she did submit her version of the story to either the Civil Surgeon or to the Inspector-General of Civil Hospitals, how would she substantiate her facts, as it is scarce likely that the menial establishment would risk punishment, or loss of their appointments, by giving evidence against the Assistant Surgeon?

Who will come forward to save the poor Female Hospital Assistant from the dangers that day and night assail her?

Yours, &c., ONE INTERESTED.

LEUKODERMA.

TO THE EDITOR, "INDIAN MEDICAL RECORD,"

SIR,—On page 238 of your Volume VIII A MOFASSALITE wishes to know (a) whether leukoderma is common among Europeans and Anglo Indians; (b) most beneficial line of treatment, and (c) a pigment which would hide the unsightly marks. Having made a special study, of some 16 years, of cutaneous affections, I shall endeavour to answer these questions, and though I write under a *nomme d'plume*, you are at perfect liberty to exchange my card with MOFASSALITE should he desire it.

(a) Yes, I should think so, as 18-28 per cent. of 1034 cases of this affection that I have attended were Europeans and Anglo-Indians. (c) Tattooing and inunction with preparations containing salts of silver, gold, or platinum have been tried; but the effects of these pigments is transitory and in some cases they have led to very untoward consequences. (b) ATMARAM suggests excision of the parts and grafting with pigmentary epithelium; but this method is harsh indeed. Occasionally success has been obtained by external application of iodides and the internal exhibition of the salts of arsenic, iron, galbanum or gold, Indian Madar and some of the higher vegetable oils. Just as any other man I have had my successes and failures but after noting that leukoderma is invariably associated with a greater or less degree of anaesthesia I concluded that instead of the old-school idea of merely "loss of pigment" the affection was really "impaired or deficient pigmentary-cell function" and accordingly reduced the legitimate 66 per cent. of failures to about 9 to 15 per cent. by the following procedure:—The affected parts having been carefully washed with soap and hot water and dried, one, two, or more (if the patient can stand it at one time) of the spots are dry-fomented and one or two drops of *Onchus Ascaridius Occidentalis* rubbed into them. This is repeated, once daily, till vesicles rise, the vesicles are broken down by a final application of castor oil and the sore healed by dressing with *Gynopentauris* solution, of which from

5 to 15 minims are also given, internally, 3 times daily. This operation is absolutely painless and, the sore healing with a perfectly smooth surface, the white area is considerably smaller and the counter-irritation (or stimulation) and alternate healing-up is repeated until the white or pinky-white marks disappear to never return.

Yours, &c., M. D., C. M.

PUBLICATION IN THE LAY PAPERS OF THE NAMES AND QUALIFICATIONS OF HOSPITAL STAFFS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Adverting on the practice of the officials of provincial hospitals advertising the names of the honorary staff, with full academic titles and qualifications, in the lay press, a member of the British Medical Association writes from Grimsby to a contemporary of your journal that the practice is an *objectionable* one that ought to be discountenanced. I wonder what he would say were he out here and glanced his eye across "Surgeon-Lieutenant-Colonel D. GALEN, M.D., M.B.C.S., D.R.H., to the civil charge of All Saints Lunatic Asylum" and such like, in the columns of the lay papers, and it is a marvel to me that with their tremendously strict enactments of medical ethics the British Universities have not found fit to remind the Indian Government that is both unconstitutional and unprofessional for Gazette notifications, of transfers, to contain the military rank and full academic titles of its medical men and otherwise make *ostentatiously* public what really concerns the Department alone and no one else, when a letter, of appointment, or transfer, &c., sent direct to the parties affected, would be more than ample and advertisement of the same is unnecessary. Whereas if advertising is absolute law a notice such as "The Officer in medical charge Khulna Railway will relieve the Officer in medical charge Dera Ghazi Khan" would more than satisfy the law.

Suppose I were to advertise my change of address and, in so doing, append to my name a list of all the qualifications I hold (some *thirty-eight* capital letters) what a racket there would be: (1) The Calcutta folk would terrify me mad. (2) My confreres call me cad, (3) My *alma matres* would probably strike me off their rolls, or severely haul me over the coals; and (4) the General Medical Council would demand inconvenient explanations.

But strange is it not, that the same colleges and medical bodies that would censure me for such above conduct because I am not a Government doctor, have, positively, nothing to say to the Government of India for repeatedly doing what every medical practitioner cannot but stigmatise as *very bad form*?

Yours, &c., NOW OFFICIAL.

THE POSITION OF BUBOES?

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—My attention has, for some considerable time, been attracted to the fact that, in both zones, buboes—excluding sympathetic ones—occur most frequently in the right groin, and for the past six years I have kept notes which I now tabulate, as having reached 150

The position of the ulcer was about equally divided, and as the lesions are too many to have a semblance of regularity, and I am unable to explain the reason, I would feel much obliged if some one else could do so.

150 Cases of Buboes.

| Sex. | Right. | Left. | Both sides. | Suppurated. | Subsided. | Total. |
|--------------|--------|-------|-------------|-------------|-----------|--------|
| Native men | 108 | 9 | 4 | 108 | 15 | 119 |
| Women | 14 | 3 | 1 | 18 | 2 | 19 |
| European men | 10 | 4 | 11 | 24 | 11 | 24 |
| Total | 132 | 16 | 15 | 150 | 28 | 178 |

Yours, &c., ALF. McCABE DILLON, L.M., DUB., L.R.C.S.I., &c.
Kumbhar, 18th September 1895.

THE SEAT OF CHANCER.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Authorities are not unanimous respecting the favorite seat of chancre; but within my 20 years, practice, I have noticed that the most common locality of the primary sore is the furrow behind the glans in the male and in the fourchette, or at the vaginal entry, in females, and I also note that in those persons who have been circumcised or have the foreskin retracted there is almost immunity from phimosis or buboes; whereas in cases where the prepuce covers the glans there is a great tendency to one or other or both of these conditions, either through lymphatic sympathy or from the irritation of the chancrous discharge.

Of 62 cases of genuine chancre that came under my observation I found that (a) 42 were in the furrow behind the glans, (b) 11 on various parts of the glans itself, (c) 6 near the meatus, and (d) 3 near the frenum. The time required for treatment was 16 to 20, 7 to 25, and 7 and 25 days respectively, and no ill results followed classes b, c and d, all of whom were cured with the exception of one case of class d, where the result was unknown.

Of class a however 16 got buboes, 10 phimosis, 1 gangrene of the glans and 15 escaped secondary complications; 23 of these cases were cured, 10 relieved, 3 forewent treatment and in 7 the result is unknown. The phimoses were laid open or circumcised, all the buboes subsided, and the gangrene case had his glans amputated.

Yours, &c., AGIA RAM, C.M.S.

SUKESAS HILL, SHAPUR.

GREENSTICK FRACTURE: HOW TREATED.

TO THE EDITOR "INDIAN MEDICAL RECORD."

SIR,—With any of your numerous readers be so good as to explain whether, in greenstick fracture, the bone should be forcibly straightened to its normal position and the risk taken of a complete fracture or should it be reduced simply and the limb allowed to become a callus, after having taken place?

Yours, &c., SURESHCHANDRA.

GOVERNMENT OF INDIA.

GOVERNMENT OF INDIA.

The most Honorable Order of the Right Honorable Sir, Surgn.-Col. Lionel Dixon Spencer, I.M.S., for services in Waziristan.

To be a Companion of the Distinguished Service Order—Brig.-Surgn.-Lieut.-Col. George McFrieda Davis, I.M.S.

To be probationary Surgn.-Lieut. in the I.M.S.—

Rangoon.—John Stephenson, Frank Wainwright, Walter Barrie Turnbull, Ernest Edwin Whaley, Arthur Leventon, Philip Francis Chapman.

Madras.—Frederick Linton Blackman, Alfred Moore, Edmund Morris Hillington, Thomas Edgar Watson, Charles George Webster.

Bombay.—Alfred Hooton, Arthur Frederick William King, Robert Fraser Standage, Andrew Armstrong Gibbs, Henry Alfred Forbes Knapton.

Brig.-Surgn.-Lieut.-Col. H. T. Brown to officiate on the Adm. Med. Staff of the Army, with the temporary rank of Surgn.-Col., *viz* Surgn.-Col. T. Macneil, Rawalpindi Dist., appointed Chitral Relief Force.

The services of Surgn.-Capt. W. D. Sutherland and H. E. Banatvala are placed at the disposal of the Chief Commr., C.P.

The services of 2nd class Milly. Asst. Surgn. W. Porroster M.B.S., and of 3rd grade Asst. Surgn. A. Williams L.B.A., are placed at the disposal of the Punjab Govt.

Privilege leave is granted as under—Surgn.-Maj. P. A. Wier M.B., I.M.S., 90 days from 18th Oct.

Her I. R. H. the Queen has permitted the following retirements from the service:—

Surgn. Lieut.-Col. J. O. M. McDonnell, M.D., from 29th July; Henry Hyde from 25th May.

Vet., Lieut.-Col. G. Kettlewell, from 19th Feb.

The following promotions are made:—To be Surgn.-Col.—Samuel O'Brien Banks. To be Brig.-Surgn. Lieut.-Col.—G. W. Calthorp, M.D., W. A. C. Roe. To be Senr. Asst. Surgn. with hon. rank of Surgn.-Lieut.—James Kelly, from 2nd Jan.; R. D. Crabbe; and William Hyde. To be Senr. Asst. Surgn. and Hon. Surgn.-Capt.—Thomas Davis; and Geo. H. Campbell. To be Senr. Asst. Surgn. and Hon. Surgn.-Maj.—James Forsyth. To be 1st class Asst. Surgn.—Harry Day; Joseph Brandon, and John Rowley. To be second class Asst. Surgn.—F. G. H. Deeks, N. A. Lemonline, and William G. Marsh.

BENGAL GOVERNMENT.

The undermentioned Asst. Surgn. has been promoted.—James Kelly to be Hon. Surgn. Lieut. from 2nd January.

Second class Asst. Surgn. to be first class Asst. Surgn. Harry Day 15th June; John Rowley from 8th July.

The following Asst. Surgns. are posted as under:—Pranabhat Bannerji and Kedar Nath Madak to the Pres. Genl. Hosp., Calcutta; Nripendra Nath Basu to the Medl. Off. Hosp.; V. M. Carleton to off. as M.O. at the Pandharpur; San Chandra Moumder to have temp. civil med. charge Pubns; Hari Charan Sen to the Plague Hosp. at Gaya; Mohendro Nath Dutt, to civil med. charge Feroz Durg; Mohendro Nath Das to the Pres. Genl. Hosp. Calcutta; Bhogobutty Komar Chowdhury, to the Animal Vaccine Depot, Calcutta.

Surgn.-Capt. W. J. Buchanan to off. as Civil Surgn. Bangalore from 10th Sept., *viz* Surgn.-Maj. G. James on leave.

Surgn. Lieut.-Col. W. F. Murray made over charge of Arrah Jail to Asst. Surgn. Krishna Gopal Mitter on 14th Sept.

Surgn.-Maj. A. James made over charge of Muzaffarpur Jail to Surgn.-Maj. F. S. Pack on the forenoon of the 10th Sept.

Privilege leave is granted as under:—

Asst. Surgn. Gobind Chander Chatterjee, from 4th to 22nd Oct. 1894; Surgn. Maj. G. James, 20 days from 18th Sept. 1895; Milly. Asst. Surgn. V. M. Carleton from 15th Sept. to 1st May 1895.

The following medl. charge was held:—

Asst. Surgn.—Kedar Nath Madak of Pres. Genl. Hosp. from 15th to 22nd Oct. 1894; Nripendra Nath Basu of civil station, Chhannagaon from 1st May 1895.

INDIAN GOVERNMENT.

The following have been granted the following offices:—
Surgn.-Maj. E. T. Parry, 99 days from 22nd August: B. Doyle, 99 days from 30th August.

The following have accepted charge as under:—
Surgn.-Capt. A. T. Macdonald of civil medical duties Madras on 22nd August.

The following appointments are made:—
Surgn.-Lt. C. E. Prall of 86th Sikhs, to offg. Civil Surgn. Peshawar from 25th Aug., vice, Surgn.-Maj. R. Doyle on leave.

Asst.-Surgn. Malik Jowala Sahai to offg. Civil Surgn. Calcutta, from 22nd Aug. vice, Surgn.-Maj. L. T. Young on leave.

PROMOTIONS.

To be Brig.-Surgn. Lieut.-Col.—William Alexander Crawford Bn. from 25th March 1893.

Her Majesty has sanctioned the retirement from the Service of Surgn. Lieut.-Col. James O'Malley MacDonnell, M.D., from 29th July 1893.

MADRAS GOVERNMENT.

Privilege leave is sanctioned as under:—

Surgn.-Maj. G. L. Walker from date of return to duty of Opde-Surgn. Lieut.-Col. W. Price, to 1st Oct.

Mr. C. A. Lafrenias to offg. Civil Surgn., Tellicherry, vice Surgn.-Capt. D. Simpson, M.B.

BOMBAY GOVERNMENT.

The following are nominated Commrs. of the Malcolmpeth Municipality in the Satara Dist. from 1st Oct.—Surgn.-Maj. C. Monks, Supdt. Abraham Shalom, Hosp. Asst.

Asst. Surgn. Ramchandra Shivaji Porodi, L.M.S., on general duty from 24th Aug.

Asst. Surgn. Mancherji Jamsaji Mistri and Surgn.-Capt. John Blackburne Smith delivered over and received charge of Shikarpur Prison on the 28th Aug.

Surgn.-Maj. T. R. Mulrooney, M.D., resumed charge as Civil Surgn. of Amritsar on 31st Aug. 1893, relieving Asst. Surgn. Sodhi Karam Singh.

Surgn.-Capt. Clark, M.B., Offg. Civil Surgn., Lahore, has obtained furlough to Europe for 2 years, with effect from the 3rd Nov.

Surgn.-Capt. C. T. Hudson assumed charge of civil med. duties of Kohat District on 6th Sept. 1893, relieving Surgn.-Capt. F. R. Orrard.

CENTRAL PROVINCES GOVERNMENT.

The undermentioned Asst. Surgns. are directed to do duty under the Civil Surgns of the districts bracketed against their names:—

Mittra Lal Bosaik and S. N. Sircar (Nagpur).

The undermentioned I.M.S. Officers are placed at the disposal of the Chief Commr.—Surgn.-Capt. W. D. Sutherland and H. E. Babatvale.

The undermentioned Civil Hosp. Assts. are transferred:—*First Class.*—Bin Mahmood to Central Jail Hosp., Bampur; Abid Hussain to be under the orders of the Civil Surgn., Jubbalpur; Bagherwarh Tukaram to the Main Diapp. Quana, *Second Class.*—Anandwin to the Jail and Police Hosp., Mandla; Musak Parash to the Central Jail Hosp., Jubbalpur. *Third Class.*—Mowrar to be under the orders of the Civil Surgn. Warkeha; Davedramath Bajerji to the Jail Hosp., Narainpur; K. Ramiah Malik to be under the orders of the Civil Surgn., Nagpore.

R.-W. F. AND OUDH GOVERNMENT.

The undermentioned offrs. are granted priv. leave:—Surgn. Maj. J. C. Parry, 99 days from 1st Oct.

Surgn.-Capt. H. W. Thomas, from 13th to 32nd Aug.

The following Asst. Surgn. has been transferred:—

Mr. P. Thomas, from Surgn. Diapp. to Sect. Diapp., Dehra

Doon.

Mr. J. C. Parry, M.D., has been posted to the 2nd.

BURMA GOVERNMENT.

PROMOTIONS.

To be first grade Asst. Surgn.—Durgu Das Bhattacharya from 1st May. To be first grade Hosp. Asst.—Srinivasan, from 2nd July. To be second grade Hosp. Asst.—T. K. Pillay from 29th April.

The Shwegyin Municipal Committee elected Mr. D. P. P. first grade Hosp. Asst. to be their Vice-President, vice Mr. Asst. Surgn. H. Wells, resigned.

The following assumed charge as under:—

Surgn.-Maj.—C. B. Bandle, M.B. of Jr. Civil Surgn. and M. O. Mily, Police Hosp. and Sunda Lunatic Asylum on 7th Sept. Surgn.-Capt.—C. N. Boudier of Thapaymyo Civil Surgn. and of Thapaymyo Central Jail on 11th Aug. First grade Hosp. Asst.—Shank Hyder Ali of Tenga Civil Hosp. on 21st Aug.; Syad Mahmood Abbas Bader of Sengar Police Hosp., Lt. Ohindwin Dist., on 23rd Aug. Second grade Hosp. Asst.—Mang Kho of Civil Diapp., Yangon, Magwe Dist., on 16th Aug. Abdul Wahid of Ry. Diapp., Myittha, Kyaukse Dist., on 3rd Aug.; Tijamal Hussain of Outpost Police Hosp., Mohayin, Katha Dist., on 21st Aug.; U. O. Chuckerbatty of Police Hosp., Bhamo 4th Sept.; Abdul Sattar of Police Hosp., Monak, Ruby Mines Dist., on 17th Aug. Third grade Hosp. Asst.—Anand Bhandu Mukerji of Mu Valley State Ry. Diapp., Mohayin, Katha Dist., on 11th Aug.; K. C. Pall of Civil Diapp., Thama, Khan, S. Shan States, on 11th Aug.; T. A. Ramaswamy of Police Hosp., Pokokku, on 15th Aug.; Bisco Charn Das of Police Outpost Hosp., Tagaung Ruby Mines Dist., on 20th Aug.; Bisco Mohun Bose of Police Hosp., Bhamo, on 23rd Aug. and thence to Shwebo Police Outpost Hosp. on 3rd Sept. Sharfuddin of Ry. Diapp., Insein Hanthawaddy Dist., on 6th Sept.

Medical charge was relinquished as under:—

Hdqd. Surgn.-Lieut.-Col. H. Johnstone, M.D., of Jail Civil Surgn. and M. O. Mily, Police Hosp., Bhamo, on 7th Sept. Surgn.-Maj. C. B. Bandle, M.D., of Thapaymyo Civil Surgn. on 30 Aug.; R. E. S. Davis, M.D., of Supt. Bhamoon Lunatic Asylum on 7th Sept.; C. B. Bandle, M.D., of Thapaymyo Central Jail on 30 Aug. First grade Hosp. Asst. C. Poornocawmy Modelar of Ry. Diapp., Insein, on 8th Sept. Second grade Hosp. Asst.—Abdul Wahid of Bhamo Police Hosp. on 19th July; Ram Lal of the Civil Diapp., Genangyang, Magwe Dist., on 18th Aug.; M. Deraswamy Pillay of the Ry. Diapp. of the Mohayin, Katha Dist., on 11th Aug.; U. O. Chuckerbatty of the Police Outpost Hosp., Shwegu, Bhamo Dist., on 3rd Sept.; Abdul Sattar of Mily Police Hosp., Bhamo on 1st Aug.; Pandit Shankar Das of the Civil Hosp., Thama, S. Shan State, on 11th Aug.; Tijamal Hussain, Mily Police Hosp., Katha, on 17th Aug. Third grade Hosp. Asst.—K. C. Pall of Telegraph Party, Kengung B Survey, Fort Stothman, Shan States on 4th Aug.; Bisco Charn Das of Police Hosp., Monak, Ruby Mines Dist., on 17th Aug.; Bisco Mohun Bose of Shwebo Police Hosp., on 4th July and of Bhamo Police on 3rd Sept.; Sharfuddin of the Genl Hosp. Bhamo on 4th Sept.

G. O. C. C.

The following A. M. S. officers having completed their tour of foreign service are placed on troopship service, on the homeward voyage:—

Bygd.-Surgn. Lieut.-Col. H. T. Brown, M.D., M. Bacc, A. A. Macrobitt, M.B.

Surgn. Lieut. Col.—G. Curry, W. Doorman, G. T. Langridge, S. M. Bismarck, J. Martin; R. H. Quill, M.B.

Surgn.-Maj.—H. Leader, H. E. W. Barrington, T. B. Moffit, G. F. A. Myrthia, J. Harman, W. Dugdale, L. W. Swabey, T. E. Nodding, I. B. Emerson, A. W. Carlson, M.B. W. T. Johnston, M.D., B. O. Ousack, W. D. A. Cowan, A. F. Hart, M.B. E. Butt, E. H. Myrie, M.D., A. E. J. Oroly, M. L. Mannell, R. F. Adams, M.D., G. G. D. Meese, J. A. Macdonald, T. A. Bisco, G. W. Robinson, G. F. Fryden, C. B. Woods, M.D., W. Kenya, H. A. H. Charlton, J. Watson, M.D., A. O. Goughan, M.B.

Surgn. Capt.—H. Kelly, M.D., E. J. D. Hill, J. W. Cocherill, W. L. Gray, M.B., E. G. Brown, J. W. Giffen, M.D.

The following have posted in the Hindustani language:—Surgn.-Capt. F. W. Brown, I.M.S., the lower standard and Surgn.-Capt. W. G. Friedman, the elementary.

ORIGINAL ARTICLES.

THE IMPORTANCE OF RESPIRATORY AFFECTIONS IN THE MORTALITY OF NORTHERN INDIA.*

By SAIG-SESON LIMUT, COL. THOMAS-HOLDEIN.

RENDLEY, C.I.E., I.M.S.,

Residency Surgeon Jeypore.

As I have no doubt that many papers will be read at the Congress on rare diseases or on those peculiar to the tropics, I should like to draw attention to the even more urgent necessity of carefully studying the common affections which are responsible for the deaths of large numbers of people, and especially to the inadequacy of our health statistics to show what are the real causes of mortality in India, and, particularly in the Northern Provinces. In the general returns, which are published by authority, no deaths are attributed to respiratory affections, whereas the death-rate from fevers is stated to be enormous. No doubt it is, but I believe that, in a large number of cases, the predisposing, if not in many instances, the true cause of death, is some disease of the lung, which is generally either pneumonia or pleurisy.

My principal reason for coming to this conclusion is that in the *post mortem* room in Jeypore, in a very large number of bodies, old and extensive pleuritic adhesions of one or both lungs are found, and persons who are supposed to have died from malarial fevers are discovered to have really suffered from pneumonia or pleuro-pneumonia. Between January 1888 and August 1894, 336 bodies were examined at the Mayo Hospital in Jeypore, and out of these, in 129 cases, one or both lungs were adherent to the chest wall, or showed the characteristic appearances of pneumonia of one or both lungs. Nearly all the bodies were those of suspicious cases, or of poor persons, which had been found by the police, or individuals who had been admitted to the hospital when in a moribund condition.

In 102 cases of death by drowning there were considerable pleuritic adhesions in 18. In many of the 129 cases referred to, that is, in nearly 38.4 per cent of the whole number of bodies examined, the signs of old lung-disease were very marked. In the eleven year period,—1882 to 1892,† 10,202 persons were treated in the Mayo Hospital in the in- and out-patient departments for disease of the respiratory system. The total mortality, all in the in-patient wards, was 182 or 1.78 per cent, and nearly all the deaths were due to pneumonia. Out of 935 cases of pneumonia there were 93 deaths or 9.94 per cent., which may be taken, I think, to be a very small mortality, as nearly all the cases, almost indeed without exception, were of an asthenic type, and, as a rule, fatal, within a short period of admission, before the effects of good diet, care, and medical treatment could declare themselves.

It is extremely rare for us to see a case in which the cough is dry, nor is the cough very troublesome, though there may be pain in the chest. The expecto-

ration is generally of a rusty brown appearance, and is not very profuse. The sputum is rarely bloody, and brown in a bad case, and often contains a lot of mucus, acts in, with, as a rule, in fatal cases, paralysis of the sphincters and diarrhoea, sometimes accompanied by swelling of the feet and albuminuria. In some cases there is gangrene of the lung, and in fatal cases, grey hepatization or suppuration of the lungs are observed. The pulse is nearly always very feeble and often irregular; the temperature is rarely very high. If it is, I generally consider it as showing a malarious tendency, and give with success several five or ten-grain doses of quinine.

The treatment recommended is a purge for the initial constipation; good and nourishing light diet (milk or soup) at regular intervals, especially during the night; warmth; stimulants; ammonium carbonate gr. v with decoction of cinchona one ounce, every 4 to 6 hours, and run, if necessary; poultices are not essential; antipyretic for high temperature is but rarely used on account of its depressing action.

Many patients are weakly pilgrims, who catch chills from the open windows of the third class railway compartments in Rajputana, from night travelling.

If a man comes into hospital at an early stage the tendency is, under these simple measures, always towards recovery, although the majority of the applicants are extremely feeble and underfed. The worst cases in these respects are those of pilgrims who fall ill on their way to their homes from distant shrines. I think the exposure at night in the third class railway carriages, in Rajputana, is also a cause, not only of cases of lung inflammation but also of other disorders.

There are only wooden sunshade windows. I think glazed windows should be provided in a certain number of the railway carriages, if not in all. They might be removed in summer.

The people do not apply at the dispensaries if they are suffering from slight coughs or a little fever, and yet out of 1,307,481 new cases that were treated at nine dispensaries in the Jeypore State from 1875 to 1892, and in eight, from 1884 to 1892, no less than 75,453 or 5.7 per mille of all the patients suffered from respiratory affections, whereas the figures for malarial fevers were 181,175 and 138,51, respectively, or less than two and half times as many.

These figures show the existence of a great amount of lung-disease which, I find, is most prevalent in Jeypore in the following order of months: March, December, April, November, February and October, and least in June, July, September, August, May and January.

I find that in 1892, 106.77 per mille of all the patients who were treated in the Rajputana Jails were entered under the heads "Lung Diseases" and "Other diseases of the Respiratory System."

In the eleven year cycle, 1882—1892, there were in the same jails 5,276 cases of respiratory affections, excluding phthisis, in 83,759 total sick or at the rate of 34.95 per mille.

There is clearly the factor of overcrowding, and may come in, but these statistics show a large amount of lung disease.

* Being presented before the Indian Medical Congress and sent to the Press for publication.

† The following table gives an indication as to the amount of the mortality.

RESPIRATORY AFFECTIONS.

THE PREVALENCE OF RESPIRATORY AFFECTIONS IN THE MORTALITY OF NORTHERN INDIA.*

By SAHJ, SENIOR LIEUT.-COL. THOMAS-HOLBEIN.
HARLEY, C.I.E., I.M.S.,
Residency Surgeon Jeypore.

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It is therefore very far from being a case in which the disease is very rare, or in the cough very troublesome, though it may be felt in the chest. The "expecto-

torious quantity of a rusty brown sputum, and a very profuse. The sputum is rarely bloody and brown in a bed-cough, and often consists of a lot of shag, sets in, with, as a rule, in such cases, paralysis of the sphincters and diarrhoea, sometimes accompanied by swelling of the feet and oedema. In some cases there is gangrene of the lung, and in fatal cases, grey hepatization or suppuration of the lungs are observed. The pulse is nearly always very feeble and often irregular; the temperature is rarely very high. If it is, I generally consider it as showing a septic tendency, and give with success several five or ten-grain doses of quinine.

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In the eleven year cycle, 1882-1892, there were in the same jails 5,375 cases of respiratory affections, including phthisis, in 22,759 total admissions, or at the rate of 24·05 per mille.

Now, possibly, the factor of overcrowding may come in, but I think it is a large amount of lung disease.

mixture; sometimes, to do the service of hops and camomile's bitter taste; grapes of paradise and cayenne pepper to give pungency; cardamom, caraway, and similar other spices to give flavor; liquorice, treacle and honey to give color and consistency. But the liberties taken with wines which admit of large foreign admixtures are great indeed and port, sherry, and champagnes do not always mean what their names imply. The common adulteration in port and sherry, is spirit, which is not always the product of vinous fermentation, but may be corn, potato or, sometimes, beet-root spirit. The following story anent the manufacture of port wine tells an instructive tale:—

"A friend of mine," says the writer, "who was staying in Reading, during the militia manoeuvres had occasion to go into the backyard of one of the hotels, where he saw a huge caldron, in which an old croon was stirring a black mixture looking like a compound of blacking, black-berries and sloes, plucked from the neighbouring hedges. What are you brewing there, my good woman? asked my friend. "Port wine for the Berkshire Militia," pertly replied the old hag, who kept stirring up the mixture with a thick stick.

Similar adulterations take place in sherries, as illustrated by the following:—For cold brown sherry, 20 or 30 gallons of unf fermented juice are boiled in earthen vessels to one fifth of its bulk, when it looks and tastes like treacle and is turned into a cask, containing more *must*, here it ferments, and the result is a very full luscious wine which is harmless compared with any one of the following three receipts.

1st.—Forty-five gallons of cider, 6 of brandy, 8 of port-wine, 2 gallons of sloe pressed in, 10 gallons of the liquor pressed off. If the color is not good, tincture of red sanders or cudbear is to be added. This is bottled and sold as port.

2nd.—Spanish wine 1,529 gallons, Fayal wine 544 gallons, French wine 4,472 gallons, Cape wines 689 gallons, Portugal wine only 117 gallons, and 154 gallons of brandy; the result obtained being 7,525 gallons, minus 8 gallons loss, which is made up with water and the, grand result of 7,533 gallons of port wine thus manufactured; was intended for exportation.

3rd.—All the refuse wine, red or white, old samples, heel-tops of bottles, and half tasted glasses, are thrown into the collecting barrel, (just as the cook throws any kind of meat and soup-liquor into his stock pot), and, with the addition of a little spirit and coloring matter, are sold as very good eighteen-shilling port.

Our Radha Bazar dealers, trodding in the footsteps of their European prototypes, have learnt a bit of the art, and can turn out sherry of their own mixing together:—

Juice of pine-apple peel, fatty matter of rotten plantains, of the *champee* species, treacle, rum and coloring matter. These sell at any price from Rs. 5 to 18 a dozen, according to the taste or the experience of the buyer.

Here is another general receipt for making sherry, port, and ginger wine:—Egg's eggs, sugar, ginger and rum, rummaged together with coloring matter made from burnt sugar or aspen wood, according to demand. These sell at 1/2 anna and 1 rupee a bottle. Some other liquors are also illegally manufactured, like in a mixture of orange, jack-fruit and plantains with rum, made at home. Vendors

also use grapes, citrons, peaches, and other fruits, which latter contain factors, to strengthen the drink.

It is my first conviction that intemperance has a general, while tendency to add to the number of our criminal population; as many of the most hideous crimes, which the preparators would have never dreamed of in their sober moments, are committed while under the influence of liquor. This is capable of satisfactory demonstration, but I regret that the manner in which criminal statistics are now furnished does not admit of this information being correctly given.

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ON INFECTIOUS PNEUMONIA.*

By SURGEON-MAJ. A. DUNCAN, M.D., F.R.C.S., I.M.S.

Residency Surgeon, Jajpore.

In this paper I propose to consider briefly the nature of an epidemic of pneumonia which came under my observation, and which afforded a striking example of the specific infectious nature of the malady. In my student days, the idea of pneumonia being a specific fever with its local manifestation in the lung was not advocated. Since that time, however, much evidence has been brought forward that such is its nature. The first indications pointing in this direction arose from the discovery of a bacillus. Undoubtedly the savant who first discovered this was the late Dr. FRIEDLANDER. In 1877 I was working in the laboratory of Professor BROOKINGHAUSEN, to whom Dr. FRIEDLANDER was Chief Assistant, and I remember, in conversation with him, his telling me that he was on the track of a bacillus. I do not propose to enter into the subsequent researches on the micro-organism beyond merely recalling some of the names, such as Weichselbaum, Fraenkel, Talamon and many others who have worked at this subject. The bacillus of Fraenkel is however claimed at the present day to be the essential micro-organism.

I pass on now to the history of the epidemic I noted. On November 25th, 1885, the 23rd Pioneers arrived at Umballa from the Pishin Valley. From November 25th, 1885, to April 26th 1886, thirty-three cases of pneumonia occurred. By months they were thus distributed: four in November, nine in December, five in January, five in February, five in March, five in April. Many surmises as to the cause of the affection were held. First, that the regiment was inadequately clothed, and that the men caught cold. Now the regiment was, in fact, one of the best clothed in the Native Army. In addition to their ordinary dress, each man had been provided with a thick sailor's jersey. Secondly, it was held that the regiment had returned from Pishin broken down in health. The following was the daily admission rate for the regiment from 1881 to 1885: In 1881, 39.65 per 1,000; in 1882, 37.29 per 1,000; in 1883, 27.43 per 1,000; in 1884, 18.55 per 1,000; in 1885 31.41 per 1,000; in 1886, 12.32 per 1,000. At first sight the admission rate for 1885 seems greatly in excess of that for 1883 and 1884, but a more minute examination showed the following facts: The great bulk of the regiment was in the Hospital from the 1st to the 15th

* Being a paper read before the Sanitary Conference at Jajpore, in March 1886.

From April 18th to November 16th the regiment was in the Upper Valley. From the latter date it was in the Lower Valley, reaching this place on November 16th. Now the rate of the head-quarters was 25-74 from January 1st to April 18th was 25-74 from April 18th to November 26th, 19-21; from November 27th to December 31st, 39-40. Hence the large bulk of admission occurred after the regiment had returned from Pishin, whilst in Pishin the admissions were only slightly in advance of those of the preceding year. *Thirdly*, a white fog that prevailed in the West in January was held in some way to have caused the disease, much in the same way as a yellow fog was evoked to account for the cholera by some authorities in Egypt in 1868. Unfortunately, however, for this foggy idea, the pneumonia continued when the white fog had disappeared, much in the same way as cholera has appeared when there has been no yellow fog. *Fourthly*, it might have been due to the cold from December to February. Cold, however, could not have caused the cases later. The temperature was taken in my hospital three times daily. Not to weary you with the tables I will merely state the temperature found at noon. In March it ranged from 71° to 80°F. In April from 75° to 94°F.

As cases still continued to come into hospital, I determined to treat them as infectious. Under my advice the O. C. had the lines vacated and the men placed under canvass. The lines were then disinfected with sulphurous acid gas, for six hours, every aperture being closed up, and on the day following the fumigation they were freely ventilated. On the third day the lines were re-occupied. By April 14th, all the lines, with the exception of those of the band, had been disinfected. On April 14th, case thirty-one, that of a musician, occurred. On the 15th the band went into tents. Two cases subsequently occurred on April 18th in the married lines: one on April 26th in the band lines. Both these cases occurred nine days after the lines were re-occupied, or eleven days, after they had been vacated for disinfection. But if pneumonia be a specific infectious fever, it will have a period of incubation. This period it may be not too much to assume may be as long as eleven days, and thus the disease may have been caught before the lines were disinfected. This theory receives support from the fact that during the same month measles had been present in the married lines. Now, subsequent to the disinfection, three cases of measles occurred, two on April 17th in lines disinfected on the 13th, and a third within a week from the disinfection. The incubation period of measles is stated to range from 7 to 21 days. Hence it is probable that all these cases were beginning, as regards incubation, before the lines were disinfected.

After June 23 the epidemic ceased.

I now propose to offer some observations on this epidemic, and to put forward the reasons for considering it to have been not merely a local inflammation of the lung:—

1. Rate of appearance of the Physical Signs.—There would probably have been some uniformity in the date of appearance of the physical signs had it been only a local inflammation of the lung. The physical signs

surely should appear on the first day if the fever had been local. But in 25 cases they appeared in the following manner:—In 5 on the 2nd day; in 7 on the 3rd; in 3 on the 4th; in 4 in 1 case on the 5th, while in 3 cases the on the 5th; and date was not noted.

2. Different conditions of the lung present on the return to the normal temperature.—If the pneumonia had been a simple local inflammation then with the return to the normal temperature the local condition of the lung should have been generally more or less identical. But in twenty-two cases in which the condition was accurately noted when the temperature fell to the normal—

In 8 cases it was in the 1st and 2nd stages.

In 1 case in the 1st, 2nd and 3rd stages.

In 3 cases in the 2nd stage.

In 10 cases in the 2nd and 3rd stages.

In 5 cases in the 3rd stage.

If the affection had been merely a local one then on the return to the normal temperature the lung should quickly be found to have cleared up. But—

In one case nine days after the return to the normal temperature, the first and second stages were found to be present.

In six cases, the signs of the second stage were present, three, four, seven, eight and fourteen days after the return to the normal.

In one case, those of the second and third stages were found eleven days after the return.

In ten cases, signs of the third stage were found on the second, third, fifth, sixth, seventh, eighth, ninth, twelfth, sixteenth and nineteenth days. If, however, we consider the lung affection merely as local expression of a specific fever, then there is no necessity for it to have ceased at the return to the normal. Thus Peyer's patches are not normal in enteric when the temperature becomes so.

4. There were cases of exceedingly high temperature with no corresponding extent of lung affection.—Thus in one case only the lower lobe was affected, yet the temperature reached 106.4°. In another where only one lobe was affected the temperature reached 106.8°F.

5. In cases where the second lung became affected secondarily to the first had there been merely local inflammation, then a second rise of temperature should have taken place. But cases occurred where, although the temperature had fallen to normal, it remained so, notwithstanding the second lung became subsequently inflamed or where a rapid fall of temperature occurred coincidently with the onset of inflammation in the second lung.

Such then are a few of the arguments that concur in supporting the idea that this epidemic was one of a specific fever, having the inflammation of the lung merely a local phenomena.

Pneumonia has frequently occurred in epidemics in the North-Western Frontier. The idea that cold especially predisposes to pneumonia was conclusively proved to be erroneous by Dr. SARGENT of America. In a paper published in the *American Journal of Medical Science* for July 1892 he showed the disease to be more

frequently met with and more common in warm than in cold climates, and in hot than in warm climates, shewing a gradually increasing ratio from the Poles to the Equator. That pneumonia, other things being equal, increases uniformly in frequency the nearer we approach the tropics. Other relations with the tropics are found to exist, e.g., a higher death-rate. Statistics for warm climates shew an average 1.70 death per 1,000, whilst for temperate zones the ratio is 1.31 per 1,000. These facts fully dispose of the old notion of pneumonia being a local affection due to cold. With these few brief remarks I bring this history to a close.

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PATHOLOGICAL AND ETIOLOGICAL REMARKS ON THE PYREXIAL STATE.

By SURGN.-CAPT. PATRICK HERIE, M.D., F.R.S.E.,
F.R.C.S.E., D.P.H. (Cantab.)

Lecturer on Medicine and Pathology, Hyderabad
Medical School.

THE ancient yet important theory of all fevers being due to the access into the system of some infective material which, multiplying within the body, produces the pyrexial phenomena, still holds with many pathologists, and in a series of lectures like these demands particular attention, even from the modern point of view.

Ptoinaïnes are certain toxic substances, resembling our vegetable alkaloids, which are produced during the process of putrefaction. GANTIER successfully inoculated lower animals with ptoinaïnes found in the bodies of persons, who died of pyæmia, and also noticed that these substances could combine with acids to form a series of salts, without losing their toxic properties. From decomposing yeast BERGMANN and SCHMIEDEBERG isolated a crystalline poison, which, injected into the subcutaneous tissue or venous circulation of animals, produced well-marked symptoms of septic intoxication, the intensity of which varied with the amount of the substance injected. From macerated dead bodies and from putrid meat infusions ZULZER and SONNENSCHNIG obtained small quantities of a crystallizable substance exhibiting alkaloidal reactions and having a physiological action, like atropine, of dilating the pupil, paralysing the muscular fibres of the intestine and increasing the pulse rate. No discovery, perhaps, attracted such universal attention as PASTEUR's micro-organism theory (1859) of fermentation, which theory was confirmed by LEMAIRE's observation, that as all fermentative changes, in fluids, are suspended by the addition, to the fluids, of phenic acid, fermentation must be due to living organisms. Next came the carefully conducted experiments of SIR JOSEPH LISTER, shewing that if air be passed through a filter, before coming in contact with organic fluids placed in an open vessel, with the mouth of the vessel so arranged that dust cannot reach the fluid by gravitation, it (i.e. air) is deprived of its action towards inducing the putrefaction of organic substances.

In former years it was held that the heat generated in inflamed areas was the sole cause of the pyrexial state in local inflammations. This, however, is only apparent; for although the outer parts of the skin over an inflamed part seem warmer, owing to the dilatation of the

vessels (rubor) and the consequent acceleration of the blood-stream in the inflamed part, as well as to the presence of heat-conducting fluids in the swelling, still it is not really warmer than the rest of the body; as the injury done to the tissues and cells must necessarily lower their vitality, and as metabolism is one of the factors of vital manifestation, it is lessened instead of being increased.

ANGERER and EDELBERG demonstrated that fever occurs after transfusion, if the transfused blood contain fibrin ferment. SCHMIEDEBERG attributes fever to the presence of another blood ferment (*hystoxym*).

BERGMANN and ANGERER's researches shew that a fever, resembling fermentation fever, can be artificially produced, in animals, by intravenous injections of pancreatin, pepsin and trypsin; as the albuminoid substances in excess in the blood undergo oxidation by the action of a ferment, and the chemical changes thus brought about elevate the temperature, while the products of oxidation are eliminated through the kidneys. RIEDAL found, in many cases of simple subcutaneous practice, albumen in the urine during the first three or four days, and the urine always contained brown masses of broken-down red blood corpuscles. After transfusion of blood WOOD MULLER invariably found a considerable increase of urates in the urine, and that the fever consequent on a septic infection is probably due to the foreign substances destroying the red and white corpuscles in the blood and generating fibrin ferment.

With regard to the etiology of fever resultant on traumatic injuries, certain heat-generating bodies, formed at the seat of inflammation, are absorbed into the blood and carried through the body, where they may act as poisons, and in this way set up thermogenetic chemical changes, resulting in fever.

Septic intoxication produced by the absorption of a pre-formed toxine or ferment, whose maximum effect is exerted as soon as it gains access to the circulation, and decreases and disappears with the arrest of further supply, and the elimination of the septic material from the circulation. *Septic infection*, on the other hand, occurs as a result of the accession to the circulation of living micro-organisms which multiply with great rapidity in the blood,—a circumstance which imparts to this form of septicaemia its progressive character.

Septic intoxication is produced either by the absorption of fibrin ferment, or the products of putrefactive bacteria—an *enzyme* or a *ptoinaine*.

The essential causes of septicaemia, therefore, are not always the same. This morbid condition represents a general pyrexial state, brought about by absorption from a local focus of various toxins whose access to the circulation is succeeded by a complexus of clinical phenomena, and different microbes having been cultivated from septic patients, it would seem that this disease can be produced by any of the microbes having the capacity of producing a sufficient quantity of ptoligistic ptoinaïnes to give rise to septic intoxication.

Fermentation fever, which is known by several names. [Thus, fermentation fever (BERGMANN), after-fever (BILROTH), septic fever (VOLKMAN), resorption fever] the general pyrexial phenomena are caused by the absorption of the products of septic tissue necrosis. The temporary fever appearing soon after an injury or operation is caused by the absorption of septic

pyrogenic substances which produce pyrexia. BEBOMANN observed this after intravenous injection of a solution of salt. KASNER, after transfusion of blood of healthy animals, and BEBOMANN, STRIKES ALBERT, and BILLROTH after intravenous injections of a considerable variety of materials, including water in which fine flour or finely-pulverized charcoal, were suspended. VOLKMAN and GENZMER observed a rise in temperature in patients soon after the operation was completed, and when the wound remained aseptic throughout, and hence called this form of fever aseptic fever.

Accepting the reactionary theory of surgical fevers, there should be practically no fever after small wounds or slight injury, and in cases of severe injury there should be high fever, lasting for a long period, and between these extremes there should be a range of temperature from a very slight to a very great rise, commensurate to the size of the wound; so that immediately on seeing the injury a surgeon should be able to define, exactly, the heat to which the temperature in any particular case is likely to rise. But no such rule can be laid down, because high fever often follows slight injury; large injuries shew frequently no rise of temperature. With the discovery in these so-called septic matters of minute living organisms, which are now generally recognized as the causation elements in the infective fevers, new light has been shed upon a previously obscure subject, and the study of fever has received fresh impetus.

There is therefore no special pyrogenic substance, as the exciting causes of fever are many. In the acute infections, as for example scarlet fever, small-pox, and cerebro-spinal meningitis, the febrile temperature is caused either by the direct action of micro-organisms upon the nerve centres, or by the action of a poison which bacteria develop within the body.

In many other febrile states, as in those resulting on injury, the elevation of temperature may be due either directly to the entrance of minute organisms, or to their impression on the nervous system. BILLROTH thought that fever in a wounded person was proof of decomposition having occurred in the wound and the passage of these products into the blood; but VOLKMAN believes the symptoms in either case to be sufficiently distinct to be called septic and aseptic fever, according as to its microbic or irritative origin.

ROSENLEACH discovered, in different fetid secretions, three forms of bacilli (*B. Saprogenes* 1, 2 & 3) which are rather large microbic organisms multiplying by end-spores and when cultivated in nutrient agar-agar, grow in the form of an irregular sinuous streak, with a mucilaginous appearance. They also grow readily in blood serum; but all cultures emit the odor of decomposing kitchen refuse, and when albumen or meat is acted upon by these cultures, it undergoes rapid putrefaction, provided it is exposed to atmospheric air, but if the air is excluded, the action of the microbes is very slight, and a culture becomes harmless when injected into healthy tissues and joints.

The *proteus vulgaris*, recently described by HANSEN, being intimately related to the processes of putrefaction, is capable of altering its form during development, and according to its various forms of growth, the different species of *proteus* is described as coccoid, bacteroid, spindle-shaped, and spirillinear. Many of the rods are

actively mobile, and rapidly liquefy nutrient gelatine, converting it into a turbid greyish-white fluid. Within a few hours after inoculation, into a 5 per cent. solution of nutrient gelatine, the most-characteristic movements of the individual bacilli are observed, on the surface of the gelatine, but not if the nutrient medium contains 10 per cent. of gelatin; Spore formation was never observed. Blank results were obtained by the subcutaneous injection of small doses, but larger doses sometimes caused circumscribed abscess at the point of injection. Whereas, intra-venous injection of a large dose produced toxic symptoms in rabbits and guinea-pigs, and that the toxic element is held in solution is known by the fact that these were not modified by using the filtrate from a liquefied culture.

Proteus Zenkeri occur in rods, about four times as long as wide, in twos like bacterium termo, and do not liquefy nutrient gelatine, but form a thick, whitish gray layer with sloping margins. The bacilli are mobile, and the same phenomena are observed on the solid medium as in the other forms; but spirilli and spiralmar forms are seldom seen. Gelatine and blood-serum cultures emit no fetid odor; but meat infusion undergoes rapid putrefaction with usual odor. The pathogenic qualities are the same as those of the other species of *proteus* by means of the soluble substances they produce when they enter dead tissue exposed to air.

The *proteus mirabilis* occurs in rods of various lengths, usually found singly and in zoogloea, but sometimes in tetrads, pairs, chains, or as short rods in twos resembling the *bacterium termo*. They have the same pathogenic properties as the *vulgaris* and in nutrient gelatine form a thick, whitish layer of concentric circles, which, liquefying the medium, show movements similar to those observed in the *proteus vulgaris*.

LISTER's great life work of antiseptic surgery is based upon the theory that inflammation, suppuration, and septic infection of wounds are caused by living specific micro-organisms. SELINI isolated ptomaines as volatile alkaloids in an exhumed body in 1872. GANTNER made quite similar observations, but believed that the toxic substances resembled the narcotics, morphine and atropine, in their action, and were more nearly allied to the alkaloids of poisonous mushrooms.

Pus and other matters from inflamed parts, when injected into the veins cause pyrexia, which is also produced by septic matters, or by injecting large quantities of water into the veins of animals. Therefore, it is no easy matter to isolate any one material as being the thermogenetic body, and even up to date. "No substance has been isolated, from inflammatory matters, that can by itself produce the pyrogenic effect: as in all the above cases death and decomposition occur in the cells either of the blood or of the tissues, so that the pyrogenic substance, acting like a ferment, breaks up the proteid matters of the tissues and causes increased oxidation."

The term *sapremia* or *sapremic septicemia*, a term introduced by the late Dr. MATTHEW DUNCAN, is the typical form of septic intoxication, always caused by the introduction into the blood of preformed ptomaines or toxins, elaborated from dead tissues by putrefactive bacteria, and is closely related to fermentation fever, as the chemical

phosphates, instead of being eliminated after the removal of the primary cause, immediately, cease and disappear.

Now an sepsis does not occur in the absence of putrefaction of urinary tissue, and putrefaction never takes place without infection with putrefactive bacteria, it becomes necessary to briefly consider the micro-organisms that cause clinical putrefaction.

In the latter part of the seventeenth century KOKKUS and LAMBERTUS claimed that putrid substances contained minute microscopical worms, which caused the putrefaction. By pointing out the resemblance between the symptoms of poisoning by mousages and by atropine, KEINER (1820) raised the suspicion that toxic alkaloids were formed through the decomposition of albumen. PAMUX (1856) showed that the inflammatory change occurring in the intestinal mucous membrane of animals fed on putrid infusions was due to a chemical poison, which remained unaffected by boiling for a long time; and this conclusion was confirmed by WEDER, HEMMER, SCHWENIGER, STICH, and THIERACH, while SIR W. B. RICHARDSON (1875) isolated a toxic substance "septon" (septon) from the inflammatory transudation in the peritoneal cavity.

Urethral fever, which is most often met in the case of old men, catheterised for the first time, begins with rigors followed by high fever, and usually ends in a few days with profuse perspiration. Sometimes, however, it may end fatally as a complication of some chronic renal lesion. The late SIR ANDREW CLARK, who was the first to call attention to the possibility of death taking place, subsequent to the passage of an instrument in old men, without any kidney or bladder trouble to account for it.

He attached great importance to the following points:—

1. In operations for the relief or cure of chronic retention of urine the bladder should not be emptied at once, but a few ounces (at a time) withdrawn and half their volume of some mild antiseptic solution immediately thrown into the bladder, each time lessening the quantity of antiseptic thrown in and increasing the quantity of urine withdrawn, thus removing the tendency to shock, hemorrhage and "urine fever."

2. Tight strictures of the membranous urethra are most safely dealt with by perineal section, but when associated with a pendulous urethra, both internal and external urethrotomy are necessary.

3. Thorough asepsis; as the decomposition of blood urine, or other organic matter, may give rise to urethral fever by producing ptomaines.

4. Those of a highly nervous temperament are the persons most predisposed to urethral fever.

5. All practicable antiseptic precautions should be closely observed in every case of dilatation, to avoid any ill-effects likely to follow the rapid dilatation of old strictures when not preceded by internal urethrotomy.

6. To ascertain the actual condition of the bladder, ureter, and kidneys, and if extensive disease be present, the greatest skill, gentleness, and patience are necessarily called for in the treatment of strictures. If the renal tract is diseased and if in any case one has to deal with

several strictures of very small diameter, it is necessary, with any simple gradual dilatation, to make internal and external urethrotomy with a silver probe, before the internal and external operation—the latter being done first.

7. *Salivæ excreta* no manifest influence over urethral fever.

8. Boric acid, internally, by its resolvent and antiseptic action, doubtless does exert a favorable influence and often proves a prophylactic, if given some days before operating.

9. With a further view to prophylaxis, both before and after all urethral operations, the canal should be injected with some mild antiseptic, and especially after each act of micturition, subsequent to internal urethrotomy.

10. When urine fever persists, despite all treatment, or, after any urethral operation, seems to jeopardize the patient's life, *perineal* section should certainly be done.

The change occurring in the state of the blood vessels is most important, as there are certain forms of pyrexia to which the fever theories, already given, do not apply, and a large number of cases are recorded where, apart from any local inflammation or specific disease, there was a very high temperature, not of course counting those cases where, without obvious cause, there may be increased production of heat from some unknown disturbance of the thermogenetic apparatus, by either central or reflex stimulation.

In the febrile state the phosphates, excreted in the urine, are at first diminished, but as convalescence sets in, they increase to a point considerably above normal.

In health a deposit of urates often occurs after profuse sweating and violent exercise in cold weather. Pathologically a deposit of urates is found in all febrile conditions in grave organic disease, particularly of the liver, and in dyspepsia.

In most febrile conditions albumen may appear in the urine, but usually only in small quantity, and practically not more than is often met with in health; but if the amount is considerable, it points to the occurrence of Bright's disease as a complication. In febrile conditions the elimination of the chlorides diminishes to so remarkable an extent that ROHMANN concludes that this diminution is due not to a deficiency of chloride taken along with the food, but to a change in the relation of the albumen of the blood to the chloride of sodium in the plasma.

Uro-erythrin is a pinkish-red pigment (the *porphyrin* of BIRD) which often appears in the urine of fever, and of cirrhosis of the liver, and attaching itself to precipitates of urates and uric acid, gives them a brick-dust hue. This deposit may occur in healthy persons, from errors in diet and other trifling causes. *Uro-bilin* is a reddish pigment, first described by JARVIS and found in considerable quantity in the urine of fever, and sometimes in that of jaundice.

It is generally accepted that slight trans and excessive heat-production sometimes result in a high temperature, which, involving a stable condition may involve a temperature of 104°F. or 105°F. for some considerable time, and is attended by flushed and dilated face, and a rapid pulse.

the heat which is actually generated, account for the clinical picture of the patient having fever and being cool or hot. Nothing, however, is absent. Now as this loss of heat seems to different subjects, we divide fever into the clinical stages of hot and cold. In the cold stage, the decrease of heat results in the vasomotor changes, making the skin pale and ex-anguine, but there is simultaneously a greatly increased production of heat, ranging from 1½ to 2½ or 3 times the amount of heat normally generated, and the great and rapid rise of temperature at this stage points to the fact that the decreased loss of heat is not the sole cause of the rise of the temperature.

During the hot stage the dilated cutaneous vessels throw off a great amount of heat but at the same time generate considerably more heat. A scale of parallels of heat production in health and in fever has been framed by some authors, who think that with a rise of 1, 2, 3 and 4°C, there is an increased production of heat of 6, 12, 18, beyond the normal, in cases in which recovery has occurred after a temperature of 106°F. I have recently recorded an instance in a case of hyperpyrexia in bronchopneumonia, where the patient recovered from a temperature of 111° Fahrenheit, but five days later, succumbed to a severe attack of convulsions consequent on the temperature reaching to 106° Fahrenheit. We cannot, however, fix the precise limit of temperature which is compatible with human existence, and though we may consider a temperature of 107° as dangerous, and one of 108° so very dangerous that the patient is sure to die; while 109°F., lasting 24 hours, is incompatible with the continuance of life. Ordinarily, a temperature of 106° or 107°, lasting any time, from 24 to 48 hours is fraught with great peril to life, especially if this occurs as a complication to any serious disease.

If in the hot stage of severe ague the temperature suddenly rises to 106°F. and falls with almost equal rapidity, there is little or no danger; but if the disturbance is due to the action of the heat effects on the surface cells of the brain in a long-lasting fever, the danger is very great indeed; there is slower excretory power from slower excretory activity—as proved by the sluggishness with which potassium iodide passes through the system to the urine.

It may be interesting to make a few remarks regarding *Hebber's Fever*, which commonly accompanies prolonged suppuration, from whatever cause, as when the wound cannot be kept aseptic and efficiently drained. It has been ascribed to the drain of the system by extensive pus formation, but this is not the only cause, as a chronic abscess may attain a very large size, and exist for years unattended by suppuration as long as it remains unopened; nor does hebb's fever occur even after opening if the cavity be well drained and the introduction of the pus can be prevented. It is more probable that hebb's fever is due to a chronic blood-poisoning, by absorption of the products of putrefaction.

Hebber's Fever is characterized by profuse sweating, rapid wasting, nocturnal rises of temperature, and sometimes diarrhoea, deposits of urates in the joints, the patient being thin with flushed cheeks and a rapid pulse, tongue pinkish red and dry at the tip, and the patient weak, and as the appetite

gradually fails, the patient becomes weaker, and weaker, and dies exhausted from diarrhoea, lardaceous disease, etc.

The *post-mortem* increase of temperature is particularly striking from diseases such as tetanus, hydrophobia and cholera is probably due to (1) coagulation of the myosin of muscles during cadaveric rigidity, (2) chemical changes occurring within the body and (3) decreased heat-loss from abrogated dissipation. HENSEN and HALM ascertained that before the body of a dead dog cooled, there was a constant but evanescent rise above the normal temperature, and similar facts have been noted occasionally in the human body, immediately after death from muscular spasms or yellow fever. WAXENLICH, who measured the temperature in a case of tetanus some 57 minutes after death, found it to be 45.375°C. or about 122°F., which was due chiefly to the chemical heat generated during the change of the semi-solid myosin of the muscles into a solid form (rigor-mortis). Therefore all conditions causing rapid and intense coagulation of the muscles (e.g. spasms) favor a *post-mortem* rise of temperature; and similar results obtain from a rapid and intense coagulation of the blood. VALENTIN so placed a dead rabbit, in a chamber, that no heat could be given off from the body, and found that the internal temperature of the animal's body was increased, and that the processes which cause a rise of *post-mortem* temperature are more active during the first than the second hour, while the higher the temperature at the moment of death the greater the heat evolved after death.

VOGEL found a maximum quantity of 1275 grains of urea in excessive fever, while the late Dr. PANKA found 885 grains of urea in a case of enteric fever, and noted that the uric acid was almost twice the amount discharged in health. This indicates considerable tissue waste, and, placed side by side with the small amount of food consumed by the fever patient, accounts for the defective nutritive condition of almost every organ of the body towards the end of a prolonged fever.

Professor BURDON SANDERSON directly opposed this view, and, while admitting that as the heat-production of an individual on fever diet and that of a fevered person is excessive, says it is not by any means greater than the heat-production of health. Dr. ORD makes the following inquiry:—Is it possible that the increased heat of fever may be brought about by the cessation of processes in which heat ought to be used up, either as reaction or chemical action, or other kind of energy?..... Is the increment of heat of body in fever due not only to combustion to or other disintegration process taking place, but also to the persistence, in the form of heat or energy, which should have taken another form? This, he says, appears to me in a high degree probable. Throughout the body we recognise two processes ever going on; the building up of tissues on the one hand, the disintegration of tissues on the other. The disintegration of tissues is clearly attended by the liberation of heat. Their building-up presents itself to me as necessarily attended by the consumption or dissipation of heat, which assumes some other form of energy, kinetic or potential. There is no direct (experimental) evidence, but we may gain some help from a consideration of the chemical processes in fever. These

comprehend, in the first place, the exaggeration of the combustion of health. But they also comprehend changes which exactly reverse those of health, and indicate strongly that there is, first, a cessation of the changes which occur in health; and secondly, a production of changes not occurring in health. The proportions of soda and potash which should be eliminated from the body in health are reversed in fever. The same holds good of chlorides, and phosphates which are the associates of highly organised principles. Again the chlorides and the soda salts are due to the introduction of further organized principles. On the view that there is in fever arrest or default of the building up of the tissues, one can imagine the retained chlorides and soda waiting with the organic substances, till at the end of a fever they part with their associate organic matters, and pass on to the elevating influence of the potash and phosphates. We can imagine the potash and phosphates during fever swept away as useless, because in the arrested ascending metabolism they have nothing wherewith to continue, and are, for the time useless, fit only for the draught. It is, in fact, presented to me strongly that these chemical variations indicate the cessation, in various degrees, of that process of tissue building which should in health use up heat, and which, ceasing in fever, leaves heat to run wild." He next details some ingenious experiments as to the temperature of growing cucumbers and bananas which so far as they go, seem to support this view, and finally states; "I believe that in the production of fever heat there is a first factor of increased oxidation or combustion, or disintegration setting free heat. I cannot, however, find this sufficient to account for all the increase of fever observed in pyrexia. The further increment I believe to be furnished by heat going astray in default of correlative change in metabolism. And, like DR. PROOBLIENT, I am inclined to recognise in the nervous system the power, inciting on the one hand disintegration, controlling on the other the nutritive functions.

What I would suggest is, that in all fever, slight or intense, there is superadded, to the combustion which we recognise, an influence of nervous system—a trophic influence—arresting processes, in which heat should be transformed; and that the increasing temperature of fever is determined by increase of this inhibitory influence.

From experiments on various animals as to the effect of hunger on their susceptibility to infectious disease, CANALIS and MORFENGO conclude:—1. Animals naturally immune to infectious disease can be made susceptible by hunger.

2. Pigeons, usually immune, always die of anthrax when starving is commenced at the time of inoculation.

3. Pigeons, which have been starved during six days before inoculation, do not take anthrax if feeding is commenced immediately after inoculation. If the starvation lasted more than six days, they, as a rule, take the disease.

4. The readministration of food retards the course but not the development of anthrax if the pigeons are allowed to feed during two days after inoculation.

5. Total or partial extirpation of the pancreas renders the pigeon susceptible to anthrax during a limited time.

6. Anthrax will finally develop in inoculated pigeons, even if starving is not commenced until eight days after ward.

7. The bacilli of anthrax introduced under the skin of immune pigeons remain alive and virulent for several days.

8. The loss of immunity in pigeons depends not on the depression of temperature during starvation, since the disease is not taken, if a similar depression be produced in other ways, and the animals be abundantly fed in the meanwhile.

9. Chickens also may be made susceptible to anthrax through hunger.

10. The majority of the animals of this species died of anthrax, if starved for three to seven days before inoculation and after it also until dead. They do not, however, take the disease if starvation is commenced only at the time of inoculation.

11. Adult white rats experimented on remained entirely immune from anthrax, even when allowed to starve for a comparatively long time before inoculation.

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PERSONAL HEALTH.

BEING A LECTURE BY S. J. MULLEN, C.M.S.,

Srinilliputr.

PERSONAL HEALTH or personal hygiene is the science of individual health. As there are public acts and laws promoting the health of communities, so are there rules and habits of life, by attention to which the health of the individual may be preserved or increased and a knowledge of these is absolutely necessary to understand how the rules and regulations of public health improve the condition of the people at large. Health is a bodily condition easily comprehended but difficult to define. It is dealt out in different measures at different periods of life, and is perhaps best defined as exemption from disease or that state of body necessary to perform every function which can be reasonably required of it, and to accomplish each ordinary task, whether of brain or muscle, without pain or sense of fatigue."

The following are the signs of health:—(a) Good constitution; (b) adaptability to widely diverse conditions of life or of climate without deterioration of energy (c) endurance; (d) self-control, mental, emotional, and sexual and (e) resistance to morbid influences. From birth onwards to old age, health varies with the body and, according to wear and tear at different epochs of life, the strain is felt in different parts, falls upon different organs, and tissues in proclivity to disorder of their several functions, whether in wear or in degeneration of the tissues of which they are built.

Value of Health. Health is one of the greatest earthly blessings, the full possession of which makes mere existence enjoyable; our work no burden, our sleep at night sound and refreshing, and time glides along pleasantly. How different in the case of sickness! With our inability to discharge our own duties, and ourselves a source

of trouble and anxiety to others. Without health rich men, amidst their possessions, nobles yea, even kings and queens are miserable, while the healthy though poor labourer, earning his bread by the sweat of his brow, finds life really happy. We are affected by the sickness of others, as well as by our own. If a child is seriously ill, all in the family feel anxious, and considerable expense is also involved. It is still worse when a wife or a good mother, who is busy from morning to night providing for the wants of her husband and children, is confined to bed by severe illness, and herself needs to have everything done for her. What a misfortune when the father of a family gets sick and loses his wages, yet has to pay for medicine and a doctor. Lakhs of rupees are thus daily lost in India and many a man gets into debt while his family may be thrown into great distress for a long time. The father may even die, his wife becoming a widow and his children orphans. Even should a man survive, a sharp attack of fever often saps his strength, making him infirm for life and rendering him predisposed to other diseases which may prove fatal. As disease is no respecter of persons, and may also become hereditary, the immense value of health is more than apparent.

Supposed causes of Sickness.—In many parts of the world, sickness is attributed to demons or to witchcraft, and some people are so ignorant that rather than give medicine they trust entirely to devil-dances and charms. In India, cholera and small-pox are especially ascribed to demons or goddesses. In the north a new goddess called ALA HIBI is thought to preside over cholera. The small-pox goddess is worshipped under different names: (*Satala Devi* or she who cools, *Mari Amman* or mother of death) in every part of India, where she is supposed to scatter the seeds of the disease for her amusement, and when a person in Southern India is stricken by small-pox, the people say "The Amman is taking her pastime over him." Many of them refuse to vaccinate their children for fear of displeasing the goddess by interfering with her sport. A common Hindu tradition lays all diseases as the fruits of sins in a former birth and considering it impossible to escape the results of *Kurma* declares that what is written by Brahma on our heads must inevitably happen. It is true, however, that many children fall victims to dreadful diseases handed down by their parents and ancestors. A Persian proverb truly says:—"The proper devil of mankind is man;" as it is from the ignorance and misconduct of ourselves, our fellowmen or our forefathers, that we chiefly suffer.

True Causes of Sickness. The world, around us, contains a countless number of different articles, each of which has its own properties—fire will burn, arsenic will kill, bread will nourish, and the only safe course is to gain a knowledge of the properties of bodies and use them accordingly. Substances, wholesome in themselves, become dangerous when mixed with poisons. Put some arsenic in a vessel of pure milk and the whole must be deadly. (a) The influence of water on health is acknowledged by many people in India. And nearly half the sickness in this country is caused by impure water. The greater part of our bodies consists of water. The water we

drink passes into the blood and thus goes to every part of the body; if the water is bad, the health must suffer. (b) Air is an important element; most needed to sustain life. We can survive several days without food, but the strongest man will die in a few minutes without air; we not only need air but the air must be pure. "Fresh air is the breath of life." (c) Improper food is another frequent cause of disease. Certain articles are liable to cause diarrhoea, which, when the disease is epidemic, may run into cholera. The proverb "taken in excess even nectar is poison" applies to food. (d) "Fifth is the mother of sickness," and in some form or other she is the *Mari Amman* or mother of disease.

Health is largely secured by (1) good water, (2) pure air, (3) suitable food, and clothing and exercise, and (4) cleanliness. Two hundred years ago, the average duration of life in England was only about 20 years; it is now 41 years, and this extension has been brought about by sanitary reform. At present the annual mortality for all India is not less than 34 per thousand or 6,800,000 a year, involving 136,000,000 cases of disease. If it could be reduced to the English standard, the mortality would sink to 4,400,000, and the cases of sickness to 38,000,000, making an annual saving of 2,400,000 persons from death and 48,000,000 from sickness. The diffusion of the knowledge of the laws of health lies at the root of sanitary improvement, and though sanitation is now, one of the subjects taught in many schools still, is very desirable that the principles should be understood by the leaders of native society, some of whom hold Government appointments, others are Municipal Councillors, and all of these more or less exert a direct influence on the mass of people. These should first clearly understand that *disease in the animal kingdom is regulated by the same laws as in the vegetable world*. As diseases do not arise of themselves but each has a separate cause, and every infectious disease has its own seed, which reproduces it just like the different kinds of grain, while the very processions and ceremonies on which the people rely for deliverance from epidemics really increase the evil. It is our duty to first gain a knowledge for ourselves of the laws on which health depends, and then to set an example in carrying them out by making our children and servants observe these closely; and lastly we should do all in our power to make them known and acted upon by all others, over whom we have influence. By following the rules of health lakhs of lives would be saved in India every year, and an indescribable amount of suffering and misery prevented. Miss NIGHTINGALE says: "Since the world began, criminals have not apparently destroyed more life and property than do epidemics every year in India." There are general rules for the preservation of health, but to guard against particular diseases special precautions should be taken.

(To be continued.)

A MIRROR OF PRACTICE.

A CASE OF PARAMETRITIS: RECOVERY.

By DR. PATE RAM BANADUR, C.M.S.

Simla.

Mrs. L., aged 19, had been delivered of a full-term child on the 2nd October 1894. It was a natural confinement, but there had been hæmorrhage after delivery, and the midwife in attendance had administered a dose of ergot. On the evening of the 4th instant she had a slight rigor, the temperature rising to 103°F.

On the morning of the 5th I was sent for, and found the temperature 103°F, pulse irregular, the patient pale and anæmic. I was not allowed to make a vaginal examination, but on enquiry, was told that the discharge was scanty; that evening the temperature rose to 104°F, and the discharge stopped entirely. A dose of salicylate of soda was given, and the midwife was told to syringe the uterus with Condy's fluid.

On the 6th the patient complained of pain in the hypogastric region. Bran fomentations were applied over the painful parts.

7th.—Temperature 6 A.M., 103.4°F, slightly delirious, complained of the pain being very severe; discharge scanty and offensive. My order as regards syringing the uterus had never been carried out.

8th.—Temperature 104°F at 9 A.M.; discharge very offensive; abdomen slightly distended. Surgeon-Major MOORHEAD was called in in consultation, and decided that the case was one of Parametritis, phenacetin 8 grains given every four hours, if necessary; a pill containing 2 grains Pil Hydrarg and 1 grain extract opii every 6th hour, and quinine; temperature fell to 100°F, mustard and linseed-meal poultice over the affected parts.

On the 9th the temperature rose to 106°F; the patient seemed in a critical state. Dr. MOORHEAD administered a tabloid of morphine and atropia sulph., and ordered the following mixture:—

| | | | |
|-------------------|-----|-----|---------|
| R Pilocarpine Nit | ... | ... | grs. i. |
| Liqr. ammon acet | ... | ... | ʒi. |
| Spt. ammon arom | ... | ... | ʒiii. |
| Spt. chloroform | ... | ... | ʒiss. |
| Aq. camph. | ... | ... | ʒvi. |

On the 10th and 11th the patient continued much the same; the temperature rising to 105°F; the discharge was less offensive, and the pain not so severe.

On the 12th a distinct hard swelling, about the size of an egg, was detected in the region of the lateral ligament, which was painful on pressure. Vaginal douche continued and plugs soaked in carbolic acid and glycerine, inserted three times daily.

On the 13th the patient seemed better. Her temperature rising only to 101; discharge free and healthy. On the 14th, 15th and 16th she made steady progress. On the 17th the swelling had disappeared. Treatment was discontinued with the exception of the vaginal douche.

She was ordered Fehle's syrup of hypophosphite of lime and extract of coca.

From this date she gradually recovered and on the 7th of November left Simla for Calcutta.

SPORADIC CASE OF ORBICULAR MENINGITIS: RECOVERY. BY ITS DISSEMINATION. BY AN INJECTION.

By JAMES E. WALLICE, M.D., L.M.S. (LOND.)

L.M.S. (London).

Calcutta.

G. K., a European planter of 25 years of age, was brought to me in July last in great distress, suffering from agonising recurrent pains about the middle of the sternum. He had been having these spasms about every five minutes for nearly three hours. They came on while he was eating his breakfast. He had taken a dose or two of chlorodyne, applied hot fomentations and a mustard plaster to his chest to relieve the pain, but to no purpose. He was pale and exhausted. Each effort to speak or to swallow his saliva brought back the pains. I inquired carefully into his case to ascertain the cause of the spasms, but could get no light on the subject. He had just returned home from Assam and was very hungry. He had had fever for some days and had eaten hardly any food during the time. He felt famished, but fearing to partake of anything difficult of digestion, he tried to eat a half-boiled egg mixed with some boiled rice. He had scarcely swallowed the second spoonful when the acute cutting pain in his chest began. He drank some tea but the pain got worse. He used the remedies already stated, and finding no relief, he hurried off from Ballygunge with his sister, to my consulting rooms.

I examined his chest stethoscopically; but no time was afforded to the nature of his trouble. I gave him a dose of morphine and made him sniff small doses of chloroform. The pains instantly ceased, but, as the effect of the anæsthetic wore off, back they came. I concluded that something had stuck in his gullet, though having eaten nothing but two spoonfuls of mashed egg and rice, I could not conjecture what the foreign substance could be. I decided on giving him an ipecac emetic, and so he was asked to take 40 grains of the powdered drug in water and this was followed by copious libations of tepid water. Scarcely had he got down about two pints, when he vomited freely and up came the top of an egg-shell, certainly the size of one-third of the whole ovum. The pains ceased absolutely and at once, and returned no more. The patient and his awe-stricken sister both laughed heartily and I felt like joining in the chorus myself, for it seemed almost incredible that a person could bolt down a third of an eggshell and be unconscious of the fact. Yet I record a fact, and my patient, who is a well-known planter, will smile when he sees this authentic account of his strange and unaccountably caused woes.

A SPORADIC CASE OF ORBICULAR MENINGITIS: RECOVERY.

By SUREN CHAT. PATRAK HANNA, M.D., M.B., B.S., L.M.S.

Lecturer on Pathology and Clinical Medicine.

Hyderabad Medical School.

CHANDAN BABA, aged 21 years, was brought to me on the 23rd August 1897. He had been suffering from fever for several days, and on the 22nd he was followed by vomiting, the temperature rising to 104°F.

...and severe headache, vomiting, and great pain and spasm of the muscles of the neck and abdomen; the head was drawn back, and the patient was in a state of rigidity. On the 18th convulsions of the body took place which with short intervals lasted for 36 hours. There was rigidity and contraction of the muscles of the neck, so that the head was forced backwards, the neck forming an arch (there was great difficulty in treating the respirations being occasionally spasmodic) the muscles of the spine and abdomen were also contracted, causing the case to resemble one of tetanus. There were no complications.

He now began to suffer from excruciating pain in the occiput and back of the neck, with shooting pains down the arms, as far as the middle of the forearms. There was great difficulty in swallowing. On the 5th September the fever went down to 99. We now gave 24 grains of quinine in two doses. The spasms ceased on the 9th, and there was no return of the fever.

There was a distinct history of poverty verging on chronic starvation, as well as repeated attacks of ague. There was also a slight enlargement of the spleen. The disease was not tetanus. There was rigidity of the neck and upper part of back, but not of the extremities, nor were there the spasmodic convulsions and lockjaw which occur in tetanus. There was no difficulty in micturition or defecation; the eyes were calm and not fixed, and although congested, had not the peculiar appearance they have in tetanus, early in the disease; the first sound of the heart was distinct, but later on it became muffled, and difficult to follow on account of the rapidity of the heart's action.

Treatment.—Blisters were applied behind the ears and cold water to the head and back of the neck for six days.

Hypodermic injection of $\frac{1}{4}$ grain of morphine to induce sleep, but later on the dose was increased to $\frac{1}{2}$ grain, and a dose of bromidia given every six hours.

In convalescence quinine and iodide of potassium, iron and cod liver oil were given. Diet was simple, consisting of milk, soup and farinaceous articles; no alcoholic stimulants were used.

TWO CASES OF SERIOUS PENETRATING WOUNDS OF THE CHEST AND NECK: RECOVERY.

By CHOITHRAM, SHEWAKRAM, C.M.S.

Adami, Hyderabad.

Case No. 1.—Ramzan, aged 25 years, was brought to the dispensary on the 14th February 1895. There was a deep wound, on the chest between the right nipple and sternum, which the man said was caused by the entrance of a thorn. Afterwards I learnt that, about a fortnight previous, he had been stabbed with a pair of scissors by his cousin.

On examining the wound I found it to be about 3 inches deep, with a very offensive discharge; the patient was weak and swallowing and breathing seemed difficult; pulse weak. The wound was irrigated and dressed.

On the 14th, a quantity of offensive pus came away, a drainage tube was inserted, and the wound dressed as be-

fore. On the 23rd, the tube was removed and the wound dressed with carbolic oil. There was no discharge, but improved steadily and was discharged on the 26th.

Case No. 2.—On the afternoon of the 20th March 1895, I was called to see a native lad of about 10 years, who had received a wound which penetrated through the neck, from right to left.

The father of the lad stated that his son had had a fall from an ass, and that a pointed piece of stick which he had in his hand had entered his neck, passing right through it. The stick was forcibly extracted by the father, upon which excessive hemorrhage took place.

The boy was conscious, but could not speak or swallow properly. I did not probe the wound, which was clean, both at its entrance and exit, but dressed it antiseptically.

The next day he had a little fever, there was a slight discharge, and the wound looked unhealthy; but from the 24th the boy improved daily, and on the 2nd of April he was discharged cured.

A CURIOUS CASE OF HYSTERIA: RECOVERY.

By KALLIPATTI C. SUBRAMANIAN, PILLAI, C.M.S.

Amrath, Kanyur.

BAHIRATTI Amman, Hindu female aged 27 years, came to my dispensary suffering from nervousness and hysterical symptoms. She stated that two years previously, she had had a severe mental shock.

She was very nervous and agitated, and shuddered repeatedly whilst recounting her symptoms. She stated that she was subject to fainting fits and palpitations, and had a dread of ultimately becoming insane.

Her organic functions were slightly disordered, loss of appetite, a slight nervous cough, kidneys irregular in their action, and the skin cold and moist.

For the first 12 days the treatment consisted of an aloetic purgative every alternate day and an ordinary saline mixture containing potassium chlorate three times daily. She improved rapidly under this treatment. On the 14th day she complained of nausea and an inability to retain any food. Sulphur magnesia with 10 drops of sulphuric acid was given, and had the effect of checking the nausea completely. On the 20th day she left the hospital stating that she felt quite well and had not experienced any nervous symptoms for the last five days.

INOCULATION OF TUBERCULOSIS THROUGH TATTOOING.

COLLINGS has reported three cases in which local tuberculosis developed as the result of tattooing by a tuberculous person, who used Indian-ink rubbed up with saliva in the palm of his hand. The tuberculosis was conveyed by a lad, fifteen years old, who subsequently died of advanced pulmonary tuberculosis. A short time before his death he tattooed two of his brothers, aged thirteen and ten years, respectively, and a friend, aged fifteen years. The arms at the site of inoculation presented pustules and ulcers. In all three cases there was enlargement of the epitaxial and axillary glands. The general health of the boys did not suffer appreciably. The lesions were all seen by Mr. JONATHAN HUTCHINGS, who expressed the opinion that they were due to the inoculation of tubercle. A piece of skin from the arm of one was examined and presented well-marked giant-cells in the corium, but tubercle bacilli could not be demonstrated. —M. M. J.

THE Indian Medical Record.

16th October, 1895.

SOCIAL OFFICIALISM IN THE INDIAN MEDICAL SERVICE.

"INDIAN sanitation is not a scientific but an official system." It was thought by many, who read Mr. ERNEST HART's epigrammatic strictures on the Indian Medical Service, that his implications in the above epigram were not in accordance with the actual state of things in that service. A more serious and damaging accusation could not be brought against any medical service than to characterise it as dominated by the "official" instead of the scientific spirit. Medical science, if not scientific in the nineteenth century, is quackery of the very worst kind. But it is not so much to the individual members that Mr. ERNEST HART's strictures apply as to the system by which promotions and appointments are made in the higher branches of the service, whereby true merit is overlooked and scientific attainments and original research are discountenanced and discouraged. If the official element of the Indian Medical Service, connected with and controlled and regulated by a great Government, is permitted to dominate the scientific element and overrule it—giving science the lower, and social officialism the higher positions,—then the charges brought against their service by Mr. HART are well founded and well deserved. Whatever abuses have existed in the past, or do exist at the present time in the Indian Medical Service, were and are due largely to the element of what we may call—for want of a better name—*social officialism*. This *social officialism* is found throughout the various provinces of India, and has its head-quarters, as is met, at the fountain-heads of Provincial Governments, such as Calcutta and Simla. This dominating principle calmly overlooks and deliberately discourages scientific and literary merit, which has always existed in the service. A most glaringly pronounced instance of this kind of official outrage has recently been perpetrated by the appointment of Surgeon-Captain DYSON to the Sanitary Commissionership of the Government of Bengal: overlooking the scientific merits, official experience and literary attainments of Surgeon-Major LAWRENCE WADDELL, the Deputy Sanitary Commissioner. How this has come about, we do not wish to enquire, as it would lead us to expose a system of social favoritism in the Bengal services which we had feign hoped, had come to an end with the advent of SIR CHARLES ELLIOTT to the Lieutenant-Governorship of Bengal. Doubtless the nomination of a successor to Dr. GAMCO lay with the Government of Bengal, but the final power of appointment is, we understand, invested in the Government of India, who no doubt acted on the nomination made by SIR CHARLES ELLIOTT. The Lieutenant-Governor must therefore take to himself the credit or odium of such an appointment, whether the name of the nominee was suggested to him by his secretaries or not. Here is a young man with no reputation of possessing, as far as we know, scientific, literary, or administrative abilities for such an

appointment, made to step over the head of one of the ablest scientists in the Indian Medical Service. DR. WADDELL has left his indelible mark upon every appointment which he has held in Bengal. As professor of Chemistry and Pathology he investigated and placed on a sound scientific basis the true nature of *abrus poisoning*; his researches on snake venom and the nature of the auto-immunity possessed by venomous snakes anticipated Professor FRASER's alleged discovery of antivenom. He has made a special study of bacteriology under KOCH. His thorough knowledge of the vernacular language, together with ten years' experience of the duties and responsibilities of the Deputy Sanitary Commissionership of Bengal, all pointed to him as the most competent scientific sanitary expert, as well as the most distinguished medical officer in the Bengal service, thoroughly fitted to fill completely the high office of Sanitary Commissioner of Bengal. The only reward obtained officially by DR. WADDELL for his original research and valuable contributions to science is to have the chagrin of seeing a younger and less competent man,—whatever his latent abilities may be—who has as yet made no reputation, or shewn any particular aptitude for scientific research, placed over him officially. We say *officially* for DR. WADDELL's reputation as a scientific investigator of European fame cannot be lowered by any piece of official outrage of this kind. The calm, clear decisions of the tribunal of science will uphold, as we believe, his future contributions to science will extend, his scientific reputation, whether it is adequately recognised officially or not. The knowledge that *transactions* of this kind—for they cannot be called scientific appointments—are not uncommon in the Indian Medical Service, has sullied the fair name of the service, and given occasion for the just strictures made, and the shafts of ridicule levelled at the system by Mr. ERNEST HART and others. But the Government of India or the Government of Bengal should not allow this matter to pass without an equivalent appointment being provided for DR. WADDELL. His enthusiasm for original research, his biological studies, his thorough knowledge of physiology and physiological chemistry, point him out as a medical officer peculiarly fitted to occupy the first rank in sanitary science and scientific research in India. This overlooking of the claims of a medical officer of such acknowledged scientific attainments will do much to discourage original research and scientific enthusiasm among the younger members of the service; and that at a time when those qualifications are most needed and most urgently called for. It was hoped by those who had the best interests of the service at heart,—and who deplored the too well founded reproach of no original research being done by its members,—that the just recognition of the merits of such men as DR. WADDELL would usher in a new era of scientific progress, and roll away the standing reproach of the Indian Medical Service.

INDIAN CHEMISTS AND DRUGGISTS: A SERIOUS PUBLIC DANGER.

DRIVING or walking round Calcutta, or any large town in India, we see numbers of houses fronts ornamented with the very significant "CHEMISTS AND DRUGGISTS" where we

our shop is to find a huge array of bottles, gallipots and pill or syringe boxes, containing patent or proprietary medicines, guaranteed to cure every mortal ailment under the sun, while in some remote, or obscure, corner of the establishment—of course we do not mean the very few large firms—we notice a scrummy table backed by dust-laden shelves carrying, for dispensing purposes, a few bottles containing for the most part expended tinctures that might almost be considered more ancient than the debris of the great deluge.

We have always striven fairly, squarely, and might and main for the elevation of *everything* connected with God's noblest gift, the medical sciences, and though we do not belong to the Mother Grundy category or the class of pessimistic creatures that see nothing good or bright in life, we cannot but insist that these sign-boards are deliberate misnomers and frauds, for though a chemist may also be a druggist, still a druggist is not a chemist; and it would be a keen insult to think that 99.5 per cent. of the keepers of these establishments were actually guilty of the crime of knowing anything about chemistry.

True that without chemistry pharmacy could not exist, and in some cases *vice versa* but a part is not the whole and pharmacy (*dhari or dawa-sazi*) constitutes but a very little part of chemistry (as defined by the Hindustani *Kimiyagari*), and in very truth the average Indian pharmacist is merely a compounder or dispenser; or, in other words, a person who, on the strength of a doctor's prescription or some proprietary remedy, compounds or mixes together crude drugs or prepared chemicals, without the slightest knowledge of the reactions, or actual chemical changes and combinations consequent on such mixing or placing together, and in 99.99 out of every 100 instances having no idea whatever of the therapeutics or pharmacology of the mixture, bolus, powder or wash, he has made up.

To him the laws of natural philosophy or physics are marvellous yet unapproachable mysteries, the atomic theory and its applications would drive him crazy, the very thought of analysis or synthesis would frighten the life out of him, and the sight of a prescription written in chemico-symbolic parlance would prompt immediate suicide. He knows (at least he declares he does) what alcohol is but C, H, O would be an insoluble riddle; and he could no more tell the difference between an *-ate*, *-ite*, or *-ide* or an *-en*, *-in*, *-ine*, or *-one* than he could soar in the skies without a balloon or wings.

Chemistry, Pharmacy and *Materia Medica* depending on each other for material and mutual support are yet separate and distinct sciences, all of which form essential portions of every medical man's curriculum, and though *materia medica* must constantly be kept in mind during the whole of the physician's after college career still only 4.001 per cent. of the doctors are chemists, and about 6.05 per cent. are pharmacists.

In every civilized country under the sun, save India, a place of business where prescriptions are filled or drugs are retailed is called, a dispensary, pharmacy or a drug store, and the persons in charge are known as apothecaries, compounders, dispensers, drug-clerks or pharmacists (but not chemists) and stringent laws prohibit them from prescribing or in any otherwise usurping the doctor's

powers; but India is a land of anomalies where by some peculiar series of illogical reasoning and evolution the germ, who has passed an exceedingly easy compounder's examination, takes his chair at the receipt of custom behind a huge sign-board "Chemists and Druggists," argues himself into a pharmacist, because he is a certificated compounder and so on, by progressive stages, until he convinces himself (hang, what the world thinks) that he is a chemist, and feels confident that he is competent to treat disease, "for is he not a chemist and does not chemistry form an essential portion of the doctor's training?" Henceforth he is "Doctor Babu," and in trying to extol himself he defames the entire faculty of medicine as well as does more actual damage to humanity than it is ever possible to conceive or repair.

Taken in their widest applications and their strictest meanings, it is simply impossible to confuse the terms pharmacy, *materia medica* and chemistry with each other, or to submit a plausible reason to justify the sign "chemists and druggists" over the door of a drug store.

Pharmacy teaches how medicines are prepared or mixed together and their doses; but *nothing* else. *Materia Medica* has several sub-divisions and tells the sources, physiological actions, and medicinal properties of drugs on various conditions of life and health, and there it stops. *Chemistry* is the science that shows the nature and properties of all bodies, medicinal or not. It reduces to their elements the thousands of various compound bodies resulting from the action upon each other of the simple substances of which the universe is composed. It enables us to fathom some of nature's secrets, detect frauds and crimes, and explain hundreds of phenomena that pharmacy or *materia* cannot give the slightest conception of: Therefore the pharmacist or compounder is *not* a chemist, who is a man of a very superior education.

When in our previous issues we contended for a higher standard of education and a stiff examination for compounders we declined against the injustice of placing these men on the same footing as those possessing the certificates of the Pharmaceutical Society of Great Britain, with its severe tests, and shewed how utterly inadequate the requirements of the Bengal Pharmacy Act were to the proper training of a class of men, on the correctness and efficiency of whose work depended not only the lives of the general public but the reputation also of the prescribing physician.

We shewed beyond dispute that, as it stood, the Compounders' Act was practically, and to all intents and purposes, a dead-letter, remarkable rather for its exceptions and neglect than for its observance; and that it is a cruel and sinful farce to place power over life and death in the hands of illiterate men who were totally incapable of holding the solemn trust reposed in them, and few indeed of whom know what incompatibles are, while very many have a happy knack of substituting trashy or expended drugs in place of reliable medicines prescribed: Therefore, to call such men "chemists" is to wilfully insult a large class of educated men (from Western Schools) who have made chemistry a special study to which they have devoted long hours of hard work, unspeakable patience and application, and a mist of money—not two years merely in learning one single book of about 350 pages of fairly large print.

WHAT THE BRITISH SOLDIER THINKS OF THE PRESENT ARMY NURSING SERVICE OF INDIA?

There are some things that indeed "die hard," and the Nursing Department of the British Army in India is an institution which promises to enter into the category of "die hard." From its very inception it was clear to all, but the most prejudiced, that such an institution was not a necessity; or, to put it in the mildest way, it was regarded as an expensive luxury which India could ill afford. We hoped, however, that when those who had given birth to this plan of nursing the British soldier in India, and who nurtured and protected it under their parental wings left the country, that this pet creation of over pathotic minds would die of inanition; but we fear that, if it is dying at all, it is dying but slowly, and that it will die hard. We said a great deal in more than one issue of this journal in depreciation of so lavish an expenditure for which infinitely more substantial and extensive nursing provision can be made for the sick soldier by the utilisation of indigenous labor; and we also pointed out that, even accepting the dictum that "medical friction beyond all contradiction is far better applied by a *she* than a *he*," nursing comrades have served, and will serve, all the needs, in the way of nursing, of the sick of our station hospitals. The kindness, tenderness, and we may almost say affectionate attention which a nursing comrade generally gives to his sick brother-in-arms is but too well known to all with any experience of British hospitals in this country; and it will be most ungenerous of army medical officers not to speak in most commendable and highly appreciative terms of their nursing orderlies. At all events it must be conceded that there is in the British soldier the material for the making of a good nurse; and if those interested in this matter will but divest their minds of all prejudice, and of that sentimentality which seems in none but the feminine touch that tenderness, and in none but the feminine breast that sympathy and kindness so comforting to and necessary for the sick, and if they will but consider the question in all its bearings, they will admit that the nursing requirements of our sick European soldier can best be met by the employment of efficient nursing orderlies. If the system of training a percentage of volunteers from each company be properly conducted, and inducements in the form of extra pay and rations during their employment as nursing orderlies, were offered the men, we may depend upon it that the sick soldiers will never die for the want of efficient nursing. We have said before, and we say again, that one of the most disastrous consequences of the introduction of the nursing branch of the Indian Medical Service has been the withdrawal practically from many serious cases of the professional attention, interference, and supervision of the Warrant Medical Officers, and the substitution of a non-professional meddlingness of the sisters in charge, for the twenty, or more, hours that a medical officer is away from hospital out of every working day.

We have been forcibly reminded of all that we had previously written on this subject, and have been induced to return once again to a consideration of it, by a

letter addressed to me by a gentleman who writes under the name of "SOLDAT." He writes on behalf of the "rank and file" of the army, and should be very glad if the old system of nursing were obtained in all hospitals. We think that just as good results would happen if it did. Neither our modesty, nor that of the lady nurses would then be flattered. Still, the same opinions were rather generally expressed very shortly after this nursing service was introduced into this country; and an extended experience has served to substantiate those views. We have no doubt that if the continuance or abolition of this service were balloted for in the British army of this country, there would be a marked, and probably an overwhelming, majority in favor of abolition; and we cannot see how any practical mind can find in this expensive sisterhood of lady nurses the best and only means of improving the sick man's chances of recovery, and soothing the dying soldier's pillow.

We think that every soldier leaving this country has it in his power to rid the comrades, whom he has left behind, of a nursing system to which he is so positively averse. The time-expired and other soldiers going home should not rest content and satisfied that their connection with any evils or inconveniences attending soldiering in India has come to a close; but they should, by loudly voicing those evils and inconveniences at home, try to relieve their brethren-in-arms, out here, from them. The British press is ever ready and willing to represent and give publicity to any matters affecting the health and comfort of the British soldier, and if all those who go home will, in consideration of the feelings of their comrades abroad, let the British press know their candid and unbiased opinion of the Indian nursing system, they will be discharging a duty which they owe to their military friends in the East. We hope that our soldier correspondent, who writes under the *nomme de plume* SOLDAT will set the ball rolling when he goes home, and that he will be able to get together a good "number to keep the ball in motion" until it reaches the goal, SOLDAT is evidently anxious it should reach, when he says "the lady nurse, out here, is an expensive luxury, which we, as soldiers, would be glad to see abolished." SOLDAT finishes us with a few more opinions, which he gives us to understand are shared by the bulk of the British Army in India, with reference to the Indian Nursing Service. We would enumerate them in quoting from his letter thus—(1) "We rather think that the corps of lady nurses has been raised to assist the daughters of gentlemen" (2) "The army nurses, in our opinion, are raised from the wrong class: as they are, with few exceptions, too big for their boots: and try to ape the doctor. Their sole duty at present appears to be to giving themselves airs, and to ordering the soldiers, orderlies and ward servants about. What their true avocations are, we are at a loss to understand, and think (3) that if they were attached and the money paid to them, expended in raising the pay of the Army Hospital Native Corps, it would be more to the advantage of the service." We think that the lady nurses have taken up nursing as a *dessein* career. In this country their professional

...and they have no... that this is so. The... to Tommy Atkins, but... more generally conceived in... of these India, and however... to their work, this country and the... in it, opposes but a very small and inadequate... for the immense amount of money expended on this... service; and if, in spite of this fact, our Exchequer, notwithstanding the embarrassments, continues to be... color is lent to the supposition that provision... the poor relations of some gentle folk, has been an... object in the establishment and continuance of... expensive addition to the Indian Medical Service. In... of the foregoing opinions we have confirmation... the statement, repeatedly and emphatically made by... us, that the Army Hospital Native Corps can, at a slightly... increased cost, be made to prove highly valuable and... efficient in respect to all the duties that may be required... of it. A better paid Army Hospital Native Corps, and... trained nursing orderlies, will supply all the nursing needs... of our station hospitals; with this advantage that even... in the field or on the line of march, nursing skill will not... be wanting. By failing to hold out better inducements... to the A. H. N. Corps and orderly-nurses, and by... neglecting to improve their nursing efficiency, we are... practically ignoring, or at the best we are making very... scant provision for the nursing requirements of the sick and... wounded on active service.

There is much of a serio-comic vein in the fourth opinion expressed by our correspondent; for although it is a fact that nursing "sometimes opens the way to the hymeneal altar," it is rather funny to conceive the possibility of a guarantee of marriage being given to the fair recruits of the nursing sisterhood. A very fair proportion however of those who entered the Indian Nursing Service have succeeded in forming matrimonial alliances, mostly, we think, with *ex-service* medical officers; and the number of those who have so succeeded, is sufficiently good to raise the hope in the matrimonially disposed "sister," of her soon being able to exchange the worries of sick nursing for the pleasures of her own home. And who can blame her for seeking such an exchange? It is for the good of communities that well ordered and satisfactory matrimonial unions be formed. We do not however mean to suggest that, to effect such good to communities, liberal subsistence allowances be made from Indian revenues to aristocratic needy ones, to induce them to enter upon matrimonial speculations out here; but we simply note how, curiously enough, the great love for her calling, which is an essential qualification of a good nurse, and the great philanthropy which prompts these good sisters to leave home and kindred in order that they may minister to the sufferings of the sick, *vide* in the East—it is we say curious to note, how all these very commendable qualities are put to flight by the gentle dem of Cupid.

We hope that a few more of our gallant sons of Mars will let the Indian and British public know what justice there is in the military expenditure of the country. They have stretched to the utmost involved in the maintenance of the Indian Nursing Service.

COMMENTS AND NEWS.

THE MEDICAL PRACTICE QUESTION IN INDIA.

Our esteemed contemporary, *The Indian Pioneer's Gazette*, continues its series of articles on this subject. Its third article dealing with "HOW MEDICAL ENTERPRISE IS HANDICAPPED," runs as follows:—

"In our previous articles we demonstrated (1) how the medical needs of the civil population in our large cities was efficiently met by the present supply of independent physicians, (2) that there was no need for Government doctors to enter the field of private practice in rivalry with independent physicians, and (3) that Government doctors faithfully performing their State-paid duties are utterly unable to do private work. We would emphasize the two latter contentions by asserting that the Government has already recognised the fact that State-paid doctors ought honestly to do nothing else but their State-paid duties. The Government, we find, has already given practical expression to this belief, by prohibiting certain Hospital medical officers and College professors from engaging in private practice. Thus we find the following officers forbidden to enter this field; the Principal of the Medical College, all the resident officers of the Medical College and General Hospital, the Superintending Surgeon of the Campbell Hospital and the Professors of Physiology, Chemistry, Botany and Pathology. We also find the same principal acting as an interdict on the Health Officer of this city and on the Port Health Officer. No Surgeon in the Indian Medical Service or in the British Service employed on duty with troops in or out of Fort William can engage in private practice, nor is such a privilege allowed to senior officers engaged in administrative work in this city. Now one would suppose that in order to be consistent, this Government prohibition of private practice by certain of its servants, if based upon a sound, reasonable and equitable appreciation of their moral obligation, to devote their whole time to State duties, should logically and legally be applied to one and all of its servants without distinction. Again, if the Professors of Medicine, Physiology, Botany, Pathology, Chemistry and Medical Jurisprudence are considered ineligible to enter into rivalry with private physicians, what peculiar personal advantages are inherent in the Professorships of Anatomy, Surgery, Midwifery or Therapeutics, that a large portion of their time should be devoted, *not* to the advancement of medical science in their special domains, or in the efficient care of their patients in the hospitals, or in the assiduous and methodical teaching of their students, but rather in doing the work of general medical practitioners. We think the public has a perfect right to enquire into the cause of this inconsistency on the part of the Government. For if the public interests are best served in one branch of medical sciences and in one hospital by the officer in charge devoting his whole time to such duties, it is simply logical to expect that the same rule must and should hold good all round. It stands to reason also that if a State-paid officer does not devote his whole time to the fulfilment of his State-paid duties, Government, in closing its eyes to this strange and anomalous fact, is an aider and abettor in a harmful system, and it is high time that these "piums" of the service, which is only a euphonious synonym for roachings, should be swept away.

There is another phase in which this handicapping of private medical enterprises by officials is objectionable and injurious to the best interests of the public. It will be readily admitted that every sculptor or artist necessarily destroys a deal of good material in his earlier attempt to acquire proficiency in his art; so also it may be "officially" charitable

to ignore failures in the earlier experiments of Microtismis, parasitologists and medical operators of sorts, but it cannot be humane or just to the interests and safety of human lives to expect a man to be suddenly transformed from an accountant, a gymnologist, or from a chemist into a high-art surgeon by an announcement in the Government Gazette! Yet this is exactly how the Government in India manufactures its professors. It is often held as an argument by men holding these medical appointments, that they are "picked men of a picked service." Statistics and facts would prove that this assertion is hardly more tenable than the system which permits these men to accept handsome salaries for a great deal of work which they never can do efficiently. There is another phase of serious objectionableness in officer-ing our public hospitals by men of the Indian Medical Service. The incumbents are constantly being shifted from one post to another, and this want of continuity leads to a lack of consolidated experience, and this often leaves the public without any reliable consulting surgeons and physicians. For these men to be relied upon as specialists, their appointments ought to be almost life-term ones. To give point to this contention we will quote some recent experiences in Calcutta. This city had two excellent consulting surgeons, both of whom were men of ripened experience gained by many years of service in the surgical department of the Medical College Hospital. Within a short space of time of each other, owing to the exigencies of the service, both these officers were removed from the sphere of their labors, taking with them a vast fund of surgical knowledge, which in their new posts was of no use to them or anyone else, and by their departure, Calcutta was left almost destitute of consulting surgeons. Strange also that a similar incident supports our contention on this score with regard to consulting physicians in Calcutta. Three able consulting physicians, whose age and mature experience gained for them the confidence of the Calcutta public, were simultaneously removed from office for various Service needs.

Worked on their present system our public hospitals must inevitably fail to provide us with anything like a continuity of consulting physicians and surgeons to satisfy the public needs. It is very true that India and the Indian Medical Service have provided for the public some great and good doctors, men such as CARTER, HOJEL, WELLINGTON GRAY, CHEEVERS, EWART, FAYRE, BOYES SMITH and others, but these men retired into oblivion and all their experience and skill was lost to India in their retirement. So it must be, as long as this system of monopolising our public hospital appointments by Service doctors is perpetuated. Calcutta cannot and never will be able to possess men of any real experience such as makes the truly expert consultant, until our public hospitals are thrown open to non-official physicians and surgeons.

We cannot understand why this unjustifiable monopoly of hospital and college appointments by men of the Indian Medical Service should be permitted to hold sway. Our public hospitals are not legally Government property. They were built and established and endowed by the contributions of private philanthropy, their working expenses are contributed to by the taxation imposed upon the people, and the public has an inalienable right to a voice in their management. We claim on behalf of the public that the opening of hospital and college appointments to private practitioners in Calcutta, Madras and Bombay would remove many serious grievances which the public has against the system which permits State-paid medical servants to block every avenue of promotion and mar every possibility of private practitioners rising to eminence in their profession. We claim also that by the present system serious wrong is being inflicted

upon the public in the education of medical students in India, as it is impossible for teachers whose time is mostly absorbed in private practice to efficiently and judiciously perform their educational functions.

We earnestly implore the Government to blot out these anomalies in the medical administration of our large cities and we should be glad to see all non-official Europeans endeavouring to remove the stigma that has hitherto most unworthily been cast upon non-official medical men, in the fact that in official-ridden India the official doctor is considered to be professionally a better man than the non-official doctor. Nothing could be more erroneous than this conclusion. Open our colleges and hospitals to our non-official medical brethren and if India has failed to knock at the door of a GULL, a HUTCHINSON, a SPENCER WELLS or a THOMPSON, men as brilliant and skilful might then be found in our large metropolitan cities."

ADMINISTRATION OF GONDAL STATE FOR 1894-95.

SELF. Self seems to be the absorbing theme of every soul; and Indian princes, as a rule, care mighty little for the tribulations of their ryots so long as their coffers are filled; but on our table lies the Administration Report for 1894-95, of the 1,024 square miles of Indian territory governed by His Highness SIR BHAGVAT SINGHJI, the Thakore Sahab of Gondal, whose life we depicted on page 183 on our eighth volume.

A young man withal (only 30 years of age) he has chosen well in his Durbar Officers and set India a noble example of self-abnegation and complete devotion to the public prosperity and individual welfare of his 5,1364 subjects, of various creeds and nationalities, scattered through five Municipalities, for out of an available revenue of only Rs. 10,89,379 he has endowed 36 scholarships, ranging from Rs. 2½ to Rs. 20 per mensem each, and actually spent Rs. 4,28,459 on the agricultural; civic, educational, medical and sanitary improvement of his territories, as well as tried to better the circumstances of his ryots and stimulate zeal towards industrial development by offering bonuses, prizes and grants-in-aid that are well worth striving for.

Thoughtful to the very extreme, he has widely differed from the opinions of the Royal (LORD BRASSEY'S) Commission, and boldly seizing the bull by the horns, has discontinued poppy cultivation and put a stop to opium consumption by issuing an order that opium eaters must not be admitted into State service, while those *habitues* already in State employ must either give up the drug within six months from the publication of the edict or *for ever* forfeit their claims to promotion; while to prevent poverty among agriculturists he has passed a decree that a judgment-debtor must accept instalments and cannot escheat the landed holdings or implements of a cultivator, in satisfaction of a debt.

Of the medical work in this state, under the care of DR. HARI BHICAJI, its Principal Medical Officer, we have already spoken on page 222 of our present volume, and we cannot but repeat that in spite of the doctor's complaint that the travelling dispensary was not quite a success, the balance of the medical work done was more than satisfactory, considering the difficulties and caste prejudices to contend with.

Judging from the magnitude of the work begun, the huge variety of undertakings got into steady progressive effect, the forward impetus given to trade and cultivation, the close bond of union brought between the Thakore Sahab and the Girmias, and the active interest displayed in the welfare of the ryots and the education of their children, the Dowry, MR. BHANUJI MEHARANI, has had no light task in assisting his prince in the management of Gondal State.

In one particular instance H. H. the Thakore Sahab has advanced Rs. 10,000 (without interest) and commodious workshop buildings (rent free) with a view to encouraging private

Industrial enterprise and enabling two copper-smiths to open an iron and brass factory in Gaudal. This reads more like a romance than a fact, as it is not within the annals of Indian history, where without the blare of trumpets, firing off of guns and advertising in all the newspapers, any ruler has before this come forward with so large a sum of money to establish two private persons in any manufacture or business that directly benefits, not the Durbar, but the subjects themselves, and these working with them.

One only thing seems strange, and that is, that with all the earnest steps he has taken to encourage education in his territories and furnish hospitals and medicines for his subjects, SIR BHAGVAT SINGHJI has not created a medical school or college to advance the noble profession of which he is an honored and deserving member.

DR. HART'S STRICTURES ON THE INDIAN MEDICAL SERVICE.

It is interesting to note how really honest critics regard MR. ERNEST HART's denunciations of the Indian Medical Service. In evidence of this we quote the words of an Indian Service correspondent of the *Lancet* and also of a service writer in the *British Medical Journal*:—

"The whole subject is one of which the complexity is hardly less than the importance, but the two things which MR. HART has plainly indicated and laid great stress on in his addresses here and in those which have since reached us are obviously urgent as matters of reform. In the first place the British Medical Service in India and the Indian Medical Service need to be brought under the same head; for while the British medical officers are demoralised and pining for want of work and want of pay, the Indian medical officers are overwhelmed with work, and get all the plums of service. Again, the present system of putting the sanitary work of India on army medical officers who are specially trained for it, and making promotion go by purely military rules, and shifting men about in the most anomalous manner, all this is destructive of real efficiency or economy. Great curiosity is felt to see what will be the result of the radical criticism from an outsider, and, with the exception of a certain minority to whom the multiplication of offices at nominal salaries is mainly a question of income, there is a general hope that the whole question may be thoroughly considered by the Secretary of State for India and by the Government of India in the direction which MR. HART suggests."

A Brigade-Surgeon-Lieutenant-Colonel, I. M. S., writes thus to the *British Medical Journal*:—

"The suggestions of MR. ERNEST HART for reconstruction and reform of the Indian Medical Service are founded, not only on his personal experience while in India, but receive the support of almost every administrative medical officer serving in India. Nor should this important fact be lost sight of, that the present system of promotions in the Indian Medical Service has given rise to feelings of discontentment and injustice on the part of several medical officers of that very service, in witness of which the *Civil and Military Gazette*, published at Lahore, wrote so long ago as December 10th, 1894. The absurdity was then pointed out, and has since been repeated elsewhere, of a "purely military medical service employed on civil work," and civil institutions staffed by military surgeons, as also of the anomalies in promotion. Correspondence in the *Pioneer* during August, 1894, after the celebrated occasion of the speech at Simla of the Principal Medical Officer of the Indian Medical Service stated that the military branch of the Indian Medical Service was rapidly going from bad to worse, and had no reason to congratulate itself on its future outlook. In short, MR.

HART's suggested reforms would set at rest jealousy, friction, and alloy diseased, all of which exist at present, proved by the expression of public opinion before quoted. The *British Medical Journal* has adverted to these matters in past issues, and the military press at home has commented in adverse terms on existing arrangements.

"It is generally believed that it is only in the civil branch of the Indian Medical Service that MR. HART's remarks have stirred up anger, for it sees in the necessary reform and reconstruction the destruction of a monopoly and the end of advancement to administrative military billets after years and years of purely civil experience, and acquisition of a competence in the latter practice."

We think the contentions of the *Record* on this subject are fully corroborated and supported by both these service writers. EURASIANS.

THE question of the socio-political position and status of Eurasians is one that is bound to engage the serious attention of the British Parliament in the not distant future. Eurasians are rising on every hand to positions of influence. Their voice will soon be heard in the highest councils of the British Empire for a distinct recognition of their rights and privileges as a "peculiar people." Their origin and growth are a natural sequence of British colonisation in India.

Socio-politically the position of Eurasians is unique. The Eurasian has really dual rights: the national inheritance of his father giving him his claim to his father's nationality, and the dower rights of his mother, both involving a principle of law admitted from the remotest era of civilisation. Every Eurasian therefore claims India as his home with all his maternal rights, privileges and duties to India as his domicile, while his paternal rights and privileges invest him with all the responsibility and duty that are summed up in the maintenance of the supremacy in India of the Government and race to which his father belongs. This then is to our mind the socio-political faith of the Eurasian. He stands between the two great races—the English and the Indian allied to both, identified nationally with the former by ties of blood, religion, education, and sympathy, and yet bound to the latter as a son of the soil.

MR. DADABHAI NAORJI, M.P., writing to us by a recent mail from the House of Commons, says:—"I have always held that Eurasians should throw in their lot with the Indians, but it is not right that they should claim themselves at one time to go with Europeans and at other times to go with Indians."

Now our honorable friend MR. NAORJI, M.P., will on a little reflection find that the advice he gives is difficult to be followed; for we would emphasize that his theory would inculcate a principle admittedly antagonistic to every nationality and religion of the world, namely, POLITICAL FRATRICIDE. The excellent race of which MR. NAORJI is a brilliant a representative is an instance in point which has held inviolate the very principle which MR. NAORJI would have Eurasians ignore. Living as the Parsees have done for the past two centuries among an alien race, and though in some measure adapting themselves to the usages and religious prejudices of the Hindus, they have never for a moment lost sight of their racial identity, not abandoned the paternal rights, social organisation, religious belief or the customs of their fathers. We need hardly dilate on this point, living as we do among Orientals who are familiar with the history of the Parsees. So the Eurasian and

Anglo-Indian, as a great Indian race, along with commendable pride to the nationality of their fathers with its great and noble traditions, its faith and its social customs as their national and indivisible heritage. We accede to the Hindu, to the Mohammedan, to the Parsee, to the fitting European population and to all the varied sections of the Indian people the religious systems that are peculiarly their own. Each has its recognized distinctive sectional religion and even racial rights and privileges allowed to it by the law and public opinion. Would we deny to the Eurasian a separate and distinctive position among these heterogeneous sections who make up the subjects of the British Indian Empire?

Justice and equity would both aid him in demanding a peculiar and unique position in India. He claims certain rights and privileges from his father's side on the one hand, his mother's on the other. His inherent instincts will ever cause him to uphold the personality of the father, the head of every family, the guardian of every home and the unit that forges the link to his claim to title of being a Britisher in every sense of the term.

PROFESSIONAL SECRECY.

"We quote the following Home truths" from the *British Medical Journal*.—DR. JESSOP, like MR. LANG, is one of the few scholars who write often and for the world without any attenuation of scholarship. It would be well if some other writers could remember that no more can be got out of themselves than they put in. In the *Illustrated News* of August 24th "the Shepherd of Arcadia" lectures medical men, and not them only, for their lackiness in respect of matters known to them in the practice of their profession. We will enter upon no defence; it is sufficient that suspicion has rested upon us. In his kindly way DR. JESSOP lays part of the naughtiness upon the "many-headed beast" the public. He tells us that the great sinner is the country doctor; yet town doctors must not be unchivalrous enough to shelter themselves under this dispensation. It is, we fear only a matter of size. Let the victim be but big enough, and urbana can bubble as incontinently as any pagan of them all. Shall we wonder if the affairs of the village SRA BOGGS are canvassed with such keenness as to drag even the village doctor into the cry? Now we are ungallant enough to hint that the error often begins by the doctor telling his wife. The partner of his bosom too often makes it a test of the loyalty of her husband that he tells her everything. It is an old saying that a secret can be kept by three men if two of them are dead, but a woman conceals—what she does not know. A wise man will make it a rule never to speak to his wife of professional matters, never even to tell her the names of those who consult him. But we will not be mean enough to let the matter lie there; if the new woman be no better than man she will stand in need of much repentance. To not a few men the consciousness of being trusted by important persons surprises their discretion, and they forget that to give up a bit of a matter of secrecy is to give up the whole; and to not a few there is the temptation to self-advertisement. No line is to be drawn between matters which seem important and those which seem indifferent. It is the habit of reticence which has to be cultivated; and the character for reticence which is to be won. He who is willing to gossip with the doctor about his neighbours will be among the first to avoid the gossiping physician when his turn comes. What saith the great lexicographer? "To tell one's own secrets is generally folly, but folly without guilt; to tell those which are entrusted to us is always treachery and treachery for the most part combined with folly."

THE VETERINARY COLLEGE.

SOME three years since a special Commission was appointed to enquire into the grounds at Belgaum, near Poona, and to report on the custody and control of the Veterinary College. To what end we wondered; as though the college was pretty thickly attended by willing students and several substantial scholarships were granted, there seemed to be no opening for the students which they should have passed out from their veterinary studies, and private practice afforded but little remuneration, if any, as traditions die hard, and it would take a month's hard reasoning to convince the average Indian that the English vet was superior to the time honored but unschooled village cow-doctor.

However, as the Government had already made excellent arrangements for the care of its own live-stock, and as this new Veterinary College was doing really good work we would naturally expect that the State would encourage the movement and stimulate healthy competition towards the acquiring of greater and sounder knowledge, by observing a strict neutrality towards the live-stock belonging to private persons, so that passed veterinary students might have the chance of earning their livelihood and recouping a portion of the money spent on their tuition. Did the Government do this, it would act both wisely and well, as success in life necessarily implies closer study to obtain success in practice, and, arguing on the well-known hypothesis of the survival of the fittest, a better class of men could be obtained for the veterinary needs of India; but it seems that the Revenue Department thinks otherwise; for it contemplates the formation of a State service for competition against independent veterinary practitioners.

The scheme, mapped out by the *Gazette of India* for the establishment of a pensionable subordinate veterinary department and a non-pensionable sub-subordinate veterinary department reads well; for the former may rise from Rs. 100 to Rs. 250 per mensem, and the latter to a maximum of Rs. 40 monthly; but this department will provide for a few (aye very few) only of the many graduates, and it is decidedly unfair that the huge remainder of the qualified veterinary practitioners should be handicapped by having to compete against men whom the Government takes under its fostering care and provides with comfortable quarters, substantial salaries, and a thousand-and-one conveniences that the independent vet must slowly rise to by dint of hard, hard work, and convincing (by cures) the people with whom he has to deal of his intrinsic worth, and complete capacity to understand and treat the maladies of four-legged and winged creation.

DOCTOR AND PROFESSOR.

A CORRESPONDENT writes us commenting on the wholesale pirating and misapplication of the terms Doctor and Professor, and the unfortunate tend of many who have no right to the claim, to prefix Dr. in place of the honorable Mr. to which (latter) they are fully entitled. His points out that strict analysis of the meaning of the terms conveys ideas rather different to those instigated by the use. The term Doctor coming from the Latin *docere*, to teach, is equally applied to those who have passed the highest professional attainments, and are (supposed to be) capable of imparting this knowledge to others. Thus we have doctors of medicine, science, divinity, dentistry, philosophy, music, law, &c. The next lower grade to doctor is bachelor, and though carrying very nearly the term doctor to an M. B., he has no special title, and he demands its application to him not as a doctor, but as a holder of any grade of qualification junior to M. D. and hence he is not a doctor, or entitled to be so addressed, as the University of London strictly speaking the term "Professor" is applied to a Doctor who teaches by means of lectures, and is not

...which, the term is equally ... and other members of the teaching ... colleges, but certainly not ... of ordinary colleges or schools. ... *British Medical Journal*—remarks: "Mr. ... with the modest aversion from special costume ... Unfortunately certain persons, whose claims ... the strongest, use the title of doctor as a means of ... and thus others are obliged in self-defence to ... the same advantages." We will not argue the pros and ... of the natural inference that the above assertion must ... but as we do not think that two or more wrongs ... possibly combine to make one right, we think that the ... every medical man, who is not an M. D. or M. B. or ... a Doctor of the learned sciences, removes the prefix ... from his door plate, cards and business-letter-heads ... for honesty and the preservation of the dignity ... integrity of the profession in the minds of ourselves and ... of the lay public."

PILES IN A POEM.

The following lines were written by a patient of DR. EDMUND PUGH, of San Francisco, whom the doctor afterwards cured of his hemorrhoids.

The Piles! Ah! I know them well,
Each feature, tho' I may not see 'em.
Old foes which fume and fret and swell
And vex and plague my perineum.
You blush at mention of a pile,
And would, perhaps, the theme avoid.
Well, then, suppose, to put on style,
We call the thing a hemorrhoid.
Tho' having an ill-omened name,
It seemed as if they might not pain us
When first as visitors they came
And took up lodgings in the anus.
But now at each succeeding bout
The plagued pains appear distincter,
And there can be no longer doubt
Of their relations with the sphincter.
You ask me by what obvious sign
One may with certainty detect them.
Well, I can only say that mine
Are like a hornet in the rectum,
Which, having wandered from the way,
And angry at the situation,
Stings right and left, the while it may,
And tortures one in defecation.
Avaunt! It is a vulgar rhyme,
Yet stay, there must be means to cure 'em.
Oh, yes, if you but give them time
And very patiently endure 'em.
There are a thousand cures, you know,
All certain sure as dead-shot candy:
The well to buy a score or so
And lay them by to have them handy.
And when the hornet's rage is spent
And things assume their wonted quiet,
The cure, tho' it may not prevent,
Will surely quell the painful riot.

MEDICAL MATTERS IN HYDERABAD.

The hospital situated in the centre of the town, is small and ill arranged, but in many ways is more adapted to the treatment of the sick than a larger one would be. A number of small private wards, in which the women are treated, are visited upon by their relatives and friends in a common courtyard. These privileges go a long

way towards inducing patients to seek in the hospital for proper treatment. Chloroform is administered in a most methodical, systematic and scientific manner and everything is carried out with scrupulous care and in great detail under the personal supervision of Dr. Lawrence, the Principal of the Hyderabad Medical School. The patient being stripped to the waist as he more easily watch his respiration, four students take charge of him. The first student announces aloud, so that all present can distinctly hear him, all the phenomena and the exact time of occurrence from the beginning of the administration until consciousness returns, the variations of pulse, respirations &c. The second student (the clinical clerk) writes down all these particulars on specially arranged forms. The third student stands on the right hand side of the chloroformist with a drachm measure-glass and a bottle of chloroform which he measures out as required. The fourth student, as the administrator himself, takes a cone of canvas (stiffened at the sides with cane), at the apex of which is a plug of clean cotton wool upon which he pours the chloroform, drachm by drachm, every minute at first, until struggling commences then half a drachm every 45 seconds. DR. LAWRIE, who looks to the respiration for a warning of approaching danger and not the pulse, is present the whole time, controlling and checking any inaccuracies during the administration, or in recording the phenomena &c.

DR. LAWRIE has, by his tact and enthusiasm, created a native medical school which gives no mean result in what was till recently, the most retrograde of the states of India.

PREVENTION OF RABIES AT THE PASTEUR INSTITUTE.

In a recent number of the *Annales de l'Institut Pasteur*, M. H. Pottevin gives the statistics of preventive treatment of hydrophobia in Paris during 1894. The total number of persons treated was 1,392. Of these, 13 died of hydrophobia, but as in 5 of the fatal cases the first symptoms showed themselves within a fortnight of the last inoculation, these should be deducted. Three cases in which hydrophobia developed whilst the patients were under treatment were also excluded. This leaves a total of 1,387 persons treated, with 7 deaths, a mortality of 0.50 per cent. The corresponding figures for the eight preceding years are as follows: In 1888, 2,671, persons were treated with 25 deaths, or 0.95 per cent.; in 1887, 1,770 with 14 deaths, or 0.79 per cent.; in 1886, 1,622 with 9 deaths, or 0.55 per cent.; in 1885, 1,830 with 7 deaths, or 0.38 per cent.; in 1890, 1,540 with 6 deaths, or 0.32 per cent.; in 1891, 1,559 with 4 deaths, or 0.25 per cent.; in 1892, 1,790 with 4 deaths, or 0.22 per cent.; in 1893, 1,549 with 6 deaths, or 0.36 per cent. Of the 1,387 persons treated 1,161 were French, and 226 belonged to other nationalities. Among these Great Britain heads the list with 125; Greece and Spain come next, though *longo intervallo*, with 26 each; then comes British India with 18. Belgium next 10, Turkey 7, Holland 2, Russia and Egypt 1 each.

LOUIS PASTEUR.

BORN at Dole in France in 1822, LOUIS PASTEUR was first brought up as a chemist, but having a leaning towards medicine, he entered the college at Paris, where in 1847 he took his degree of Doctor, after which he turned his close attention to biology, in which he made several valuable discoveries, especially as regards the laws of fermentation, and first brought himself into distinction by his researches on zymotic diseases in silkworms and domestic animals. His frequent dives into the mysteries of nature so infused him with the theory of the creative value of atmospheric virus in *legion stercoris* that he commenced and, in spite of the little

oppositions he met, continued a series of investigations round which raged a furious controversy regarding the ethics of vivisection; but he persisted in his self-imposed task until he solved the deadly conundrum of rabies and gave the world a ready means of successfully combating the hitherto (claimed to be) insensible hydrophobia. The Paris Pasteur Institute and a number of branches in various parts of this world remain to testify that though this year gathered this grand old man (at the age of 78 years) into the realms of the great unknown, he has left an indelible mark behind and hundreds live to thank him for snatching them from the jaws of a horrible death, while the faculty of medicine can never sufficiently thank him for the immense service he has rendered to mankind by showing them the methods by which they can readily arrive at the etiology of many an infectious disease and find means for its prevention and cure.

THE HORRORS OF A DOCTOR'S LIFE AS PROVED BY THE JAMES CASE.

Her lover sent Miss JAMES for treatment to Dr. LEHMAN, who, suspecting appendicitis or typhoid fever, advised her to lay up at a quiet boarding house, where he visited her several times; but as she grew worse, he called in Dr. E. E. KING and performed an operation, six days after which the girl died. The lover creating some ugly rumours about the case, an autopsy was made, disclosing that though the direct cause of death was septicaemia, pregnancy had existed, and the cervix uteri had been torn, while removing the contents of the womb. In consequence Dr. LEHMAN stood charged with the serious crimes of procuring an abortion and thereby causing the death of Miss JAMES; but the inquest completely acquitted him from all blame by bringing out the facts that the girl being prostrated with severe rigors, rapid pulse, high temperature and a very offensive discharge *per vaginam*, Dr. LEHMAN sent for Dr. KING in consultation, when it was decided that the intense gravity of the symptoms demanded an immediate evacuation of the uterus. Miss JAMES was accordingly chloroformed, her cervix dilated with great difficulty by fingers and steel dilators and a putrid foetus, dead at least a fortnight or three weeks, was delivered, appropriate treatment was carried out, but she died some six days after the operation.

POISONING AS A FINE ART.

MOHAN SINGH, his brother and a woman, SADAKUR, went to Chindwara, where under the plea that they were Thakurs, forced from Panna by debt, they started operations with stramonium and reaped a rich harvest by drugging and pillaging whole villages; but nemesis was on their track, as growing careless with the callousness of undetected crime, after poisoning some 80 persons, they began to openly wear some of the plundered jewellery, and attracting the close attention of the myrmidons of the law they were pounced upon and sentenced to fourteen years' penal servitude. Their *modus operandi* of averting suspicion from themselves was to curry favor with their neighbours and, offering to grind their wheat, secretly mix dhatura meal into the flour, which was then cooked by the unsuspecting victim, and all who partook of this poisoned flour became more or less insane when MOHAN SINGH and Co. eased them of their valuables and let the blame of the drugging fall on the innocent cook.

THE DISCOVERER OF MATCHES.

THOMAS has just died at Saint Lothaire, in the Jura, a country doctor, named Sauria, aged 84, said to be the inventor of lighter matches. In 1831, when a pupil at the College of Dole, Sauria had the idea of making matches with saltpetre of potash, phosphorus, and sulphur. But he was unable to patent his discovery, as he lacked the 1,000 francs necessary to do so. He talked with M. Moit, his professor of physics at the College, and that gentleman lectured on the subject some time after when visiting Germany. The

German remembered the episode, while the French, who came back to France and were called *allumettes*. When M. GRÉVY was President of the Republic, Dr. Sauria, who a worn-out old man, got a Government appointment as the keeper of a tobacco shop.

FILTERS FOR INDIA.

It is a universally accepted sanitary axiom that "pure water is synonymous with "good health." Pure water is one of India's crying needs. A well-arranged water supply is an urgent desideratum in every Indian Municipality. But the machinery and plant for a perfect water supply cost prodigious sums of money, and these, our village hamlets cannot afford. Clean, protected wells are the next means of protection from preventable disease. Better again than unsafe "protected" wells are FILTERS. Can India be provided with an efficient easily worked and cheap FILTER? We read now-a-days of filters that defy disease germs and make drinking water absolutely safe from all sources of infection and contamination? But all these filters are too expensive for general adoption in India, and what the medical profession throughout this country feels as a pressing need, is a really good, cheap domestic filter. Surely mechanical and sanitary engineers are not so deficient in constructive genius as to allow so needful a commodity to be vainly sought after in so promising and lucrative a field as the Indian market? Who will construct a cheap and reliable filter for India?

THE NATION'S DRINK BILL.

THE Parliamentary return submitted by Sir F. SEAGER HUNT for 1891 shows that the increased consumption of chicory, cocoa, coffee, tea and non-alcoholic beverages had far outstripped that of intoxicants, for though the value of the latter reached the enormous figure of £138,737,828 for the whole of Great Britain and Ireland, and though the expenditure on beer had gone up £408,002, spirits had decreased by £237,767, and wines by £287,286. Thus shewing a net decrease of £287,286. This augurs extremely well for the moral progress of a nation that used to spend more than double the above amount on their annual liquor bill.

A PRIVATE SANITARIUM FOR MUSSOORIE.

Dr. John Morton M.D. of "West Lynne" Mussoorie, who has been most successful in practice in that delightful hill station, has taken the commodious house known as "Mayfield", to which he has made many useful additions and alterations, so as to fit it for a private hospital. It is now complete and ready for the admission of patients and invalids. We congratulate Dr. Morton on his enterprise and commend his zeal to the support of our brotherhood.

THE RECORD SECTION OF THE COATES MEMORIAL FUND.

WE now desire to appeal in a special manner to our brethren to send in their subscriptions to the "RECORD SECTION" of the Coates Memorial Fund, and we would be extremely grateful to see a large number of those who knew Dr. J. M. COATES, send in their amounts, no matter how small or how large, at once. We shall publish the list of donors when it is sufficiently large. Surgeon-Major N. O. Hodgkins M.B., Medical College, Calcutta, will act as treasurer to the Fund and to him all subscriptions should be sent. Messrs. Grindlay & Co. Calcutta, agree to be the bankers of this section of the Fund.

DEATH FROM A LUNATIC'S BITE.

A DANGEROUS lunatic being arrested by Inspector Fitzgerald last week, orders were issued to remove him to the Bolnada native lunatic asylum in Bhowanipore, whither two native constables were conveying him to a gallery, when he bit one of them severely on the right arm. The injured man was removed to hospital, where he died, two days after, "perfectly used."

INDIAN MEDICAL PROVIDENT FUND.

In our last number we recorded 85 names as willing to join the above fund. We now have pleasure in noting the following additions:—S. Chakraborty, M.D., L.R.C.P. & S. (Edin.) Patiala; Surgeon-Major E. B. Wrafter, I.M.S., Dehra Dun; Surgeon-Captain G. H. Campbell, S.A.S., I.M.S., Calcutta; Surgeon-Captain W. Church, F.R.C.S., S.A.S., I.M.S., Poona; Surgeon-Captain G. H. King, S.A.S., I.M.S., Bolaram; Assistant Surgeons Jogendranath Biswas, L.M.S., Jhelum; E. H. Thomas, M.B., L.R.C.P. & S., Dehra Dun; F. J. Daley, I.M.S., Dehra Dun; Ham Narayan, L.M.S., Delhi; H. Day, I.M.S., Saltpore, E. B. S. By.; A. H. MacGregor, I.M.S., Bombay; J. T. Neill, I.M.S., Aden; T. H. Aquino, L.M.S., Gaidag; J. A. Bailey, I.M.S., O. Fox, I.M.S., P. Victor, I.M.S., A. Robinson, I.M.S., E. A. Picachy, I.M.S., Camp Jalala; Durga Prasad, C.M.S., Dehra Dun; P. V. R. Pillai, C.M.S., Kykolor; J. Eschkei, Mbow; U. R. Dubay, C.M.S., Wardha; A. M. Lazarus, C.M.S., Mandalay; Bisto Mohun Bosa, C.M.S., Shwegyn, Upper Burma; Nehal Chand, C.M.S., Majulghar, Assam; Kalkhuree Jivanji, L.M.S., Secunderabad, Deccan; G. P. D'Souza, C.M.S., Amraoti; M. Iyaswamy Pillay, C.M.S., Akidli; Asst Surgeons. L. N. Choudhuri, L.M.S., Balaghat; A. Rodrigues, I.M.S., C. M. D'Souza, I.M.S., Quetta; Gunga Gobinda Sarkara M.B., Noakhali; Dr. C. W. Roberts, Civil Surgeon, Tharawaddi; V. S. B. Mudaliar, C.M.S., Channagiri; D. Dahyabhai, C.M.S., Rajkot; Asst. Surgns. H. F. G. Kinsley, I.M.S., Aden; J. O. Bailey, I.M.S., Amritsar; Dr. S. J. Mullens, S.R.I. Srivilliputur. This makes 102 names and completes the preliminary list.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

THE following have joined the Indian Medical Association since our last publication of names:—Charles F. Parker Assistant Surgeon I. M. S., Webb St. Fitzroy, Melbourne; H. C. Banerjee C.M.S. Civil Medical Officer, Gyoblugonk, Thariawady District; Hemadry Daraswamy Pantulu C.M.S. Civil Hospital, Tharawady; George E. Claxton L.R.C.P. and S. Edin. Nainital. M. Iyaswamy Pillay C.M.S. Akida, Godawari District; Miss M. E. Bryan M.D. Mission Hospital, Bareilly; Z. Feldstein, M.D. Calcutta; Surgn.-Capt. George Edmond King, S.A.S., I.M.S., Bolaram.

SHORT ITEMS.

In England no certificate of the cause of death is recognised, unless given by a practitioner whose name is on the *Medical Register*. A person merely present at the time cannot give a certificate of the cause of death; and if an unregistered medical practitioner gives a certificate, it is regarded by the registrar merely as a part of the information tendered by the "informant."

It is said that donkey lymph has been used for vaccination purposes with great success in the Punjab. According to a contemporary, people who have imbibed donkeys' milk in their childhood carry through life a certain wrong-headed argumentativeness, something akin to the stubbornness of the ass.

The *Times*, discussing the Bluebook on sanitary measures in India, refers to the ravages of contagious diseases in the army, and says it would seem to be one of the first duties of Government to consider how far their responsibilities to the Army and nation have been adequately discharged under the present system.

Malcolm Morris of the *Practitioner* says the *Indian Medical Record* is a handicap for writing against the opium question. Unable to give an honest blow itself, the *Indian Medical Gazette* reproduces in its columns, Malcolm Morris' article in extenso. Bravo!

Mr. John Elliot, Meteorological Reporter to the Government of India, who arrived in Srirangar on the 30th Sept. is consulting Dr. Mitra, Meteorological Reporter to the Cochin State, on the feasibility of opening one or two observatories in the higher altitudes near Skardu and Dera.

Dr. William Hotchkiss died in St. Louis, Mo., April 1st 1895. A letter received from his old Virginia home over a year ago said that he was born there in 1736. His Masonic record has been traced back one hundred years, showing conclusively that he was at least 121 years old.

The Government of India has been pleased to continue the employment on the personal staff of the Lieutenant-General Commanding the Forces, Madras and Bombay, of the Military Assistant-Surgeons formerly authorised for the army headquarters of these commands.

Some touchy I.M.S. surgeons threaten to resign the British Medical Association unless Dr. Ernest Hart's sweeping denunciations of their service be rescinded. An old woman of a Professor of the Calcutta Medical College, an I.M.S.-man of course, asks that Hart be beheaded.

We note with regret that the "Social" column of the *Indian Daily News* (of which a service doctor is a shareholder) is again being used for the surreptitious advertisement of Service doctors.

The Terrol Company, have been awarded a gold medal for Terrol, at the World's Exhibition at Amsterdam.

The new regulations of the Ministry of Education admit women to the University at Berlin to study medicine, dentistry and pharmacy.

Professor Haffkine is now on his way to Paris. His intention was to lay the results of his Indian labours before Pasteur. Unless spiritualism come to his aid, Haffkine must wait till the "Sweet by and bye."

A strong effort is to be made in parliament for the renewal of the C. D. Acts. The devil is in power if the abomination succeeds.

Dr. Soltan will leave Ootacamund about the end of next month, having been offered and having accepted the post of medical missionary in a London district.

Surgeon General Longmore A.M.S., the well known writer on Military Surgery, died in London on the 2nd October.

The death is announced of Surgeon-General Irvine, who was for many years Civil Surgeon of Alibabad.

Members of the Indian Medical Association, who have not paid their subscriptions, will oblige the Treasurer (Surgeon-Major H. C. Medghia, S.A.S., Medical College, Calcutta) by sending them in without delay.

Subscribers in arrears with their payments to the "Indian Medical Record" will oblige the Proprietor by remitting their dues as early as possible.

VITAL STATISTICS

| Provinces and Districts. | Population according to last census. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population per annum. | Causes of Death. | | | |
|---------------------------|--------------------------------------|----------------------------------------|-----------------------|---------------|------------------------------------------|------------------|----------------------|--------|-----------|
| | | | | | | Cholera. | Bacillary dysentery. | Fever. | Smallpox. |
| ASSAM. | | | | | | | | | |
| Goalpara ... | 452,304 | { For the month of July '95. | 1,479 | 1,614 | 8.67 | 708 | 45 | 4,280 | ... |
| Kamrup ... | 434,349 | | 811 | 1,302 | 2.95 | 293 | 113 | 828 | 28 |
| Sibsagar ... | 457,274 | | 758 | 1,083 | 2.26 | 75 | 7 | 881 | 153 |
| Sylhet Dist. ... | 2,154,598 | | 8,908 | 4,849 | 2.19 | 73 | 164 | 1,255 | 411 |
| BENGAL. | | | | | | | | | |
| Calcutta { Urban ... | 681,560 | { Correct returns not available. | | | | | | | |
| { Suburban ... | 116,606 | | | | | | | | |
| Howrah ... | 165,192 | | | | | | | | |
| Patna ... | ... | | | | | | | | |
| BOMBAY. | | | | | | | | | |
| Bombay ... | 821,784 | Returns not received. | | | | | | | |
| BURMA. | | | | | | | | | |
| Moulmein ... | 53,785 | { From 24th August to 21st Sept. 1895. | " | 92 | 20.93 | ... | ... | 27 | 14 |
| Rangoon ... | 180,824 | { From 24th Aug. to 27th Sept. 1895. | " | 551 | 21.62 | ... | 1 | 99 | 42 |
| CENTRAL PROVINCES. | | | | | | | | | |
| Jubbulpore ... | 78,155 | { From 24th August to 21st Sept. 1895. | 176 | 390 | " | 93 | ... | 155 | 87 |
| Nagpur ... | 117,014 | | 474 | 875 | " | ... | ... | 165 | 17 |
| Saugor ... | 32,786 | | 08 | 175 | " | 44 | ... | 57 | 23 |
| MADRAS. | | | | | | | | | |
| Madras ... | 425,518 | { From 24th August to 27th Sept. 1895. | 1,699 | 1,858 | 50.45 | 18 | ... | 706 | 278 |
| Madras ... | 87,428 | | Returns not received. | | | | | | |
| Tritchinopoly ... | 90,609 | | Returns not received. | | | | | | |
| N.W. PROVINCES. | | | | | | | | | |
| Allahabad ... | 162,893 | { From 1st Aug. to 21st Sept. 1895. | " | 209 | 0.42 | 1 | ... | 143 | 8 |
| Benares ... | 213,168 | | " | 699 | 1.19 | 17 | ... | 401 | 50 |
| Cawnpur ... | 168,779 | | " | 880 | 0.74 | 2 | ... | 278 | 1 |
| Lucknow ... | 244,908 | | " | 471 | 0.74 | 2 | ... | 986 | 16 |
| PUNJAB. | | | | | | | | | |
| Amritsar ... | 135,403 | { From 31st Aug. to 14th Sept. 1895. | 221 | 324 | 46 | ... | ... | 134 | 12 |
| Delhi ... | 189,648 | | 480 | 320 | 89 | ... | 4 | 189 | 13 |
| Lahore ... | 159,897 | | 388 | 217 | 36 | ... | ... | 240 | 25 |
| Mooltan ... | 64,265 | | 148 | 80 | 65 | ... | 11 | 27 | 11 |
| Peshawar ... | 68,079 | | 78 | 78 | 65 | ... | 13 | 89 | 6 |

*Returns not complete. †Beri Beri 2, Kala Azar 18. ‡Beri-beri 7, Kala Azar 138. §Beri-beri 8, Kala Azar 111. ¶Beri-beri 74.

Current Medical Literature.

MEDICINE.

The pathology and treatment of an ordinary bilious attack.

DR. ROBERT SAUNDY, of Birmingham points out, that in ASCHESON'S time (1864), the physiology of digestion and the pathology of the stomach were so ill understood, that what appeared him a mere collection of symptoms, dependent upon deranged function is, nearly to us, the effect of catarrhal inflammation of the mucous lining of the stomach and duodenum. The term "bilious" is very loosely applied in common parlance to signify headache, acidity, flatulence &c. Often enough the symptoms are of nervous origin and have nothing to do with a proper bilious attack. "How to give liver."

a very common question, conveys an entirely different impression to the patient and is often the result of inadequate pathological knowledge. The primary seat of the mischief lies, NOT in the liver, but in the stomach, as the pathological basis of the symptoms presented, is the inflammatory condition of the gastric mucosa, from the ingestion of friable and indigestible food.

The case of Alexis St. Martin illustrates a very important point, viz., that a patient may be in apparent good health and yet suffer from bilious attacks. He was noticed that after drinking about spirits thrice for eight or nine days, Martin usually complained of tenderness at the pit of the stomach, weight, etc. His tongue was thick coated and his countenance yellow. In all other respects he was apparently quite well and healthy. His appetite was very good. The attack of biliousness was caused by the sudden accumulation of the stomach.

...the patient was not much out of sorts.

The treatment consists in keeping the inflamed surfaces of the mucosa apart by means of bland easily chewed and highly non-irritating diet. Vegetables must be interdicted owing to their containing starch, also sugar, cheese, acids, fried meats &c. Spirits and wines must be prohibited, but clear with mineral water is a harmless drink. During convalescence the light meats, suitably cooked and well masticated, are well tolerated (even by an inflamed stomach) whereas starchy foods cause flatulence. DR. SAUNDY believes in stimulating the normal mechanism by which the stomach empties itself by means of blue pill—thus:—two 5 gr. blue pills are given on two successive nights. In the morning a breakfastcupful of warm water containing $\frac{1}{2}$ of Carlsbad salts is sipped; while before each meal a powder consisting of Bismuth, Rhubarb, Sodium Bicarb. and pulv. Cinnamon is taken, suspended in a little milk. If these means fail to cure a bilious attack in 3 or 4 days our diagnosis must be reconsidered. We must look for something in addition, or something else, e.g. acute gastric catarrh, with a clean tongue.

Treatment of Diphtheria.

DR. WHITE, after reporting a series of cases treated at the Willard Parker Hospital, draws the following conclusions:—

1. That frequent washing of the air-passages attacked by diphtheria lessens the duration and amount of diphtheritic membrane.
2. The addition of antiseptics, of sufficient strength to be germicidal, to the irrigating fluid, is irritating to the mucous membrane, thereby causing extension and persistence of false membrane rather than the effect desired.
3. The addition of antiseptics to the irrigating fluid is liable to cause system poisoning and disagreeable complications from the swallowing and absorption of some of the fluid used,—e.g., the two bichloride cases cited above.
4. Spraying the throat (also the pernicious treatment of swabbing), whatever solution is used, can have no good effect as the parts reached by the spray must necessarily be very limited, excepting, possibly, in the hands of an expert. Furthermore, the spray cannot be used with young children, as anyone can testify who has tried it. This is especially true of some solutions where it is necessary to use a glass syringe.
5. Frequent cleansing of the throat and nasal cavities with a bland solution, such as plain warm water or normal salt solution is easier of application, is more agreeable to the patient, and does all that any antiseptic solution can accomplish, either upon duration of the membrane or the period of isolation.—*Gillard's Med. Journ.*

Dry Gangrene after Snake-Bite.

DR. CAPTAIN F. J. PORTER, A. M. S. writes in the *British Medical Journal*:—"With reference to the case of dry gangrene after snake bite reported by Dr. M. S. DOBBS in the *British Medical Journal* of July 6th, I would like to mention that a healthy Musselman boy, aged about 17, came to the Indian Army Hospital about three weeks ago with typical dry gangrene of the terminal phalanx of the middle finger of the left hand. He had been stung by a scorpion about ten days previously. The tip of demarcation was well marked above the middle of the second phalanx. It was let alone until the separation had extended to the base, and then the

bone was cut through, a little higher up, having been with a very useful stump. In this case I suppose that the gangrene had been stopped in the terminal phalanx on account of the pressure on the blood-vessels of the inflammatory process poured out at the seat of inoculation. The gangrene was also strictly local. From the extent of the gangrene in Dr. DOBBS's case, I should be inclined to think that the barbed wire ligature was the cause of the extensive gangrene which resulted.

Causes of Sexual Debility in the Male.

MANY authors attribute this condition to masturbation, or to excessive venery or to organic stricture or to atrophy of the testes, solely, but STUART contends that these play but a secondary part in the imperfect erections and premature emissions which he thinks are usually, if not entirely, due to irritability or hyperesthesia of some portion of the urethra. He also finds that varicocele plays an important part, and the history of tuberculosis, syphilis and gonorrhoea should all be taken into consideration when summing up the causes that lead to sexual debility and the connubial misery or mental agony it occasions.

Biliary Cirrhosis in Children.

FROM several clinical observations published by them, in extenso, GILBERT and FOURNIER concluded that though all the symptoms observed in the adult were present in biliary cirrhosis in children or commencing in childhood, still the hypertrophy of the liver was not very great; but the spleen was so conspicuously enlarged as to create error in diagnosis, and in many instances osseous nutrition was so deranged as to cause clubbing of the fingers and enlargement of the ends of the femur and tibia.

Rheumatic Fever and its Epidemiological Relations.

NEWHOLME shows that dampness does not cause or favor rheumatic fever, although causing so-called "chronic rheumatism." Muscular rheumatism is probably closely related to acute rheumatism, which is a specific infectious disease, not so much due to heredity as is supposed, and probably not produced by the influence of a meat diet. In the years when it is epidemically prevalent, the ground water is low and exceptional scarcity of rainfall prevails. A dry soil appears to favor and it would seem that the conditions of soil producing malaria are exactly opposite to those favoring rheumatic fever.—*Lancet*.

Paroxysmal Hemoglobinuria.

BY means of repeated experiments on the human subject CHAFFARD has proved that although the paroxysmal hemoglobinuria produced by exposure to intense cold presents the prodromal symptoms and premonitory albuminuria of a general attack, still it materially differs from the typical affection by the blood clot refusing to redissolve, and he therefore concludes that in addition to exposure to cold some central nervous disturbance (whose path is uncertain) is essential to the starting point of the chemical processes that result in an attack of hemoglobinuria.

Scotch Heart.

FOUR cardinal rules with regard to diet: 1. There must never be less than five hours between meals. 2. No solid food is ever to be taken between meals. 3. All those with weak hearts should have their principal meal in the middle of the day. 4. All those with weak hearts should have their meals as dry as possible.—BALFOUR (*N. Y. Med. Rec.*)

SURGERY.

Radical Cure of Hernia.

According to pathological and anatomical grounds, FERGUSON takes exception to the practice of removing the sac in operations for hernia, and claims to have effected quicker and radical cures by the following methods:—*Inguinal Hernia.*—Between 1 to 1-inch incision parallel to POUPART'S ligament over the inguinal canal to the pubic spine and divide all the structures above the canal and between the internal and external abdominal rings. Dissect out the sac, loosen its neck from its attachments, transect it several times in a proximal direction with a suture that has been firmly secured to the distal end, and passing the needle from down up through all the structures in front of the subperitoneal tissue, draw it out 1 inch above the internal abdominal ring, and after pulling on the suture so as to throw the sac into folds and bring the parts together, fasten it to the external oblique muscle. Pass three inversion-sutures, from without inwards, through the deep fascia, parallel to Poupart's ligament, and approximate all the muscular aponeuroses by 3 or 4 mattress sutures, from below upwards, in such manner as to bring the lower and external structures over and in front of the upper and internal structures. Lay the cord upon the external surface of the external oblique muscle and close the skin wound. (3) *Femoral Hernia.*—The operation is on the same lines as above, except that the sac is folded upon itself and fastened within the aperture of the crural canal, care being taken to cut away involved omentum and to cover the raw stump with peritoneum before returning it to the abdomen. Should, however, the sac be too small to close the hernial opening and approximate Poupart's ligament to the pectineal fascia, a periosteal flap may be utilized or a flap of the pectineal fascia and muscle should be raised and stitched to form a buttress.

Gonorrhoeal Immunity.

1. GONORRHOEA is a self-limited disease, recovery following after a varying length of time, without any treatment other than plumes, baths, and hygiene. 2. Abortive treatment does not succeed rapidly and fully until the period of acute inflammation has passed. 3. A patient, either male or female, apparently, though not really cured, is capable of transmitting a subacute gonorrhoea—that is, the colorless drop of secretion is capable of inoculation if it contains a few gonococci. The author consequently believes that the gonococcus during its evolution modifies its culture media, i.e., the urethral mucous membrane. It continues to grow there but becomes more and more attenuated and latent until it finally disappears. Unless this is true, a gonorrhoea, untreated, would last indefinitely, the cocci multiplying and re-inoculating themselves in the infected urethra continuously. It is at the time when the virulence begins to diminish that abortive treatment succeeds. If, on the other hand, this attenuated gonococcus comes in contact with a healthy mucous membrane in another individual, it is immediately rejuvenated, prospers, and produces acute gonorrhoeal symptoms, since it finds there a suitable culture medium, which is not exhausted with that from whence it came and where it was about to die. The objectors to this theory say: "If you admit that the role of the culture-medium is thus superior to that of the microbe, how can you explain acute attacks in men having gleet? How can their exhausted mucous membrane become re-inoculated?" GUARD believes this re-infection is impossible in cases where the gleet discharge continues long. He, however, reserves his opinion regarding this form of relative immunity until further facts are procured. JAMIN AND GUARD.

Diagnosis of the Intestine after Rupture of the Abdomen.

THE absence of free fluid in the (Morley). 1. Frequent and uncontrollable vomiting. 2. The appearance of peritonitis, if lesions of the kidney, bladder, liver, and spleen can be excluded. 3. Spontaneous pain in the abdomen is itself itself of much diagnostic value.

Regarding the advisability of operating in these cases, the author says: 1. If there is unmistakable evidence of rupture of the intestine, immediate laparotomy is indicated. 2. Exploratory laparotomy, after confusion of the abdomen is usually to be avoided; in uncertain cases, expectant treatment should be adopted (Mety). 3. If soon after the injury (twenty-four to thirty hours) there are signs of sepsis, operation is contra-indicated. A low temperature with marked constitutional symptoms is an especially unfavorable condition. 4. Rapidity and delicacy are essential in operating for rupture of the intestine, especially if peritonitis is present. Therefore make a long abdominal incision, rapid, systematic examination of the intestine, avoiding rough tearing or handling; and if possible to avoid it, do not resect the intestine; employ simple Lambert sutures, or at most a wedge-shaped resection of the injured portion of intestine, and close with a simple running suture including the muscular and serous coats. Flushing the abdominal cavity with antiseptic liquids is to be avoided.—BENNETT.

On the Treatment of Fractures, near a joint, by rest, aided by Massage and Passive Movement.

DR. MILLER draws attention to the unsatisfactory results obtained by the present system of treating fractures near joints.

The chief cause of these unsatisfactory results he believes to be the long period of rest maintained, during which time the damage done to the joint is ignored. The rest alone would not cause ankylosis, but when a fracture takes place near a joint, there is effusion of blood and serum into and around the joint. If this state of matters be left to themselves it is quite evident that adhesions and contractions would form, which materially interfere with the usefulness of the limb.

DR. MILLER goes on to shew how this difficulty can be met, by treating the two injuries simultaneously. Rest for the fracture, and massage and movement for the joint, which can be effected by opening the splint twice a week, when the limb should be carefully massaged and the joint worked with every precaution to prevent movement of the fractured surfaces.

The advantages of this combination of rest with massage and passive movements are:—(1). Complete rest is provided for the fracture. (2). Swelling and effusion are got rid of more quickly by the massage. (3). Adhesions are prevented by passive movements; and (4) union of the fractured surfaces is probably facilitated by the massage.

Fistula in Ano.

1. NEVER sever the sphincter at more than one place at the same operation, no matter what the complications may be, otherwise incontinence is sure to follow. 2. Unless all the channels are followed up and laid open, the operation will fail of its purpose. 3. Fistula resulting from tubercular abscess must not be operated upon if there is sufficient tissue destruction of long to produce lasting incontinence, even when the fistula is opening over a painful abscess of the sphincter; then it should be divided at any stage. 4. After laying the fistula tract open the rectum must be made

to the lower part of the wound, and the edges of the wound will then close. It will throw out a more healthy granulation than tends to bridge over and close the wound, leaving a surface at the bottom, thus leaving a healthy granulation. 5. When the fistulous tract is not too complicated, it should be dissected out entire, and the wound brought together, beginning at the bottom, with continuous suture and approximating the surfaces in subcutaneous layers until the whole wound is closed.—BACON.

Indications for Resection of Skull.

1. We are called to make a resection in complicated fractures, when it is feared that infective matter has entered the wound, or when it is known that the cranial cavity has been penetrated by some dirty knife or instrument. 2. In fractures to which an aseptic dressing has been applied. 3. When we suspect a fracture of the inner table or for depressed fractures. 4. For the removal of foreign bodies, bullets, knife-blades, etc. 5. For cerebral hemorrhage, with signs of compression, and for the ligation of the middle meningeal artery. 6. For fractures which have subsequently become infected through carelessness on the part of the surgeon or attendant. 7. For tumors of the brain, abscess of the brain, epilepsy, and chorea when due to trauma, syphilis, tuberculosis.

Laparotomy in Tuberculous Peritonitis.

COMMENTING on the rapid involution of tuberculous nodules after laparotomy, NANOTTI and BACCHOCCHI conclude that the beneficial effect is produced not by the antiseptics applied to the peritoneal cavity, but by the shock of the operation setting up inflammatory reaction of the peritoneum, whose absorbing power is thereby increased and a strong impulse given to phagocytosis, connective tissue formation, degeneration of the cellular elements and vascularisation of the tuberculous nodules with rapid and successive fibrous transformation.

Surgical Brevities.

THE indiscriminate use of antiseptic injections cannot be too strongly condemned, since many fatal results have immediately followed its practice. Immediate washing out of the pleural cavity after operation, for ordinary empyema, is always an inadvisable and hazardous procedure, and is only permissible at later periods when practised with the greatest caution.—WHITE.

Stricture of the Urethra is most safely healed by gradual dilatation repeated every third day. In continuous dilatation a filiform bougie can remain three days, after which other instruments can be used.—HOBWITZ.

CLEANSE Varicose Ulcers with sodium bicarbonate, apply methyl-violet solution, cover with absorbent cotton, and give even support to the tissues by bandage.—SUMMERS.

Early application of strong nitrate of silver solution is useful in Bed Sores.

Storing the Hypodermic Syringe is apt to spoil the leather packing.

Carbolic Acid should be applied very sparingly to open wounds, especially in young and old subjects.

There are three chief points to be considered in effecting Intestinal Anastomosis, or in suturing a wound of the intestine: 1. That adequately broad and sufficiently wide surfaces of healthy intestine should be in contact. 2. That though it is advisable to exclude the mucous membrane from the stitches, the fibres of the submucosa coat must always be included. 3. That the operation should be performed as rapidly as possible.—BROUHAU.

ABOUT the earliest symptom of Prostatic Disease, is an increased frequency of urination, especially at night. This symptom very often precedes any enlargement that can be discovered either by rectal examination or by the use of the catheter.—KEMM.

Auto-inoculation of Chancre.—In the first case the seat of the chancre was inoculated in the right scapula; in the second, the chancre was on the inner side of the eyelid, which the patient had rubbed continually; as a particle of iron shaving had lodged in the conjunctival cul-de-sac; in the third, it occurred in the folds of the prepuce.—KOLLY.

OBSTETRICS AND GYNECOLOGY.

Deep Incision of the Parturient Cervix for Rapid Delivery.

DR. J. CLYTON EDGAR, in a long and well-illustrated paper, deals with the question of the scope and usefulness of deep incisions of the cervix in parturient patients with eclampsia, a method of operative interference by means of which Dithrasen has obtained brilliant results, having in thirty-five cases saved all the mothers, and all but two of the infants. Three cases are reported, in two of which the above-named operation was performed, whilst in the third the deep cervical incisions were accompanied by mechanical dilatation. In the last-named case the mother and twins were saved; in the former two instances the mother died in one, and the child was saved in both. In the case which proved fatal to the mother an autopsy was obtained. DR. EDGAR believes that the operation should only be undertaken when the entire supravaginal portion of the cervix is dilated, i.e., when the defective dilatation is confined to the vaginal portion. The field for the operation is a limited one, and the method of treatment must be regarded as serious. It is not possible yet to say what the ultimate value and real danger of the incisions may be, for sufficient cases have not been reported. The risk of septic infection may be greatly lessened by strict surgical cleanliness. Hemorrhage is not much to be feared if the incisions are deeply made, still it is well to introduce a tampon of iodoform gauze into the genital tract. A useful bibliography accompanies this paper.—*Amer. Jour. Obstet.*

Twin Pregnancy with Fetal Mummification.

DR. ULECIA gives a summary of a case of twin confinement with mummification of one fetus, reported by DR. CARRERA of Habana. The mother, a multipara, 23 years of age, showed purpuric spots at the fifth month of pregnancy. Under treatment by perchloride of iron these disappeared but later signs of ante-partum septicemia occurred. Notwithstanding treatment, the fever continued, and labor supervened prematurely. After the birth of a living fetus, there was placental retention with syncope. The placenta was extracted manually, and with it came away a mummified fetus of six months. The placenta was single, and gave insertion to the two umbilical cords.

Rectal Examination of Pregnant Women.

W. H. BECKMAN has tried this method with great success in 100 parturient women, the details of pelvis and cervix being easily made out. The length of the pregnancy and state of the bladder could not be determined in 7 per cent. of the cases, and the fontanelles and sutures could not be felt in 23 per cent., but this was of less importance, since the position of the fetus could easily be detected by external examination, and especially by auscultation. It was always possible to distinguish the occipital from the frontal portion of the head. The advantage of rectal examination is that infection through the genitals is avoided, the only objection

being the most common method through the vagina may become necessary, and the following notes through the external os, although the latter practice is not recommended, since the external os does not contain specific microbes. The author considers vaginal examination of great value to midwives, enabling them to determine if the presence of an obstetrician will be necessary. DEWEES's experience in the Leipzig Obstetrical Clinic showed that students instructed in this method of examination could determine all the necessary details without recourse to vaginal examination. RIES believes that midwives should be forbidden to make examinations through the vagina, as their duty is only to assist at normal births. KROEMER is inclined to permit vaginal examinations only (1) when it is difficult to determine through the rectum what part of the fetus is presenting, (2) when the midwife is not able to bring about relaxation of the cervix, (3) when the pains last for more than two hours.

Calculus in the Fallopian Tube.

GILLES describes and figures an S-shaped calculous concretion, nearly one inch long, in a diseased tube. It was composed almost entirely of phosphate of lime. On pressure it was soft and yielding. The patient had been an invalid for many years, and suffered chiefly from some gastric disorder. She had also acquired the morphine habit, subsequently to an attack of rheumatism, several years before operation. The pelvic trouble is reported as very acute, only beginning about ten days before the parts were removed, the patient catching cold. The temperature at the time of operation was 106°F, and the patient was in a state of extreme collapse. An exploratory laparotomy was performed, and the right tube and ovary were removed. The patient grew rapidly worse during the brief operation, and died seven hours later. No necropsy is reported. There was hydrosalpinx, the tube being also inflamed and the ovary involved. —*John Hopkins' Hosp. Rep.*

The Hysterical Breast.

This is a condition which GILLES DE LA TOURETTE considers of much importance, not only because it is a well-defined manifestation of hysteria, but also from the fact that it has given rise to errors of diagnosis and needless removal of the organ. It consists in a temporary enlargement of the breast, with considerable hyperaesthesia of the skin covering the organ. This hyperaesthesia is liable to vary, becomes much more marked during menstruation; there is then also more swelling, and considerable pain is complained of. On palpation at such a time it is possible to perceive one or perhaps two tumour-like masses in the substance of the breast, about the size of a hen's egg, but which are not painful, the hyperaesthesia being cutaneous. The affection is often of long duration, more especially in those cases where there is faulty menstruation, as often happens. It seems to depend on a hysterogenous band of hyperaesthesia at the level of the breast, which induces an oedema of the connective tissue of the gland. In this way are produced the local swellings, and even patches of white, pink, or violet under the skin. —*Brit. Med. Jour.*

Indications for Induction of Abortion.

Absolute Indications: 1. Uncontrollable vomiting of pregnancy. 2. Incurvation of the gravid uterus. 3. Obstruction of the pelvic outlet by tumours or exostoses. 4. Progressive and perniciious anaemia. 5. Gravid chorea.

Relative Indications: 1. Great contractions of the pelvis with the conjugata vera below 8 cm. 2. Pulmonary embolism with signs of degeneration of the heart. 3. Nephritis, especially with oedema. 4. Chronic heart disease. 5. Other general diseases of the mother which jeopardize her life at the time of delivery.

...should not be ...
...N. T. Med. Soc.

Performance of the Cesarean Operation with Prolapse of the Placenta.

MASS has reported a case in which, following an abortion by means of catheter containing a stylet, the uterus was dilated and its contents removed with the aid of a catheter. It was found that the uterus was perforated, and through the opening a portion of lacerated small-intestine had passed the way. Celiotomy was performed, hemorrhage controlled, and the lacerations repaired, and the patient made a rapid and uninterrupted recovery. —*American Journal of Obstetrics.*

On the Line of Action to be adopted in the case of a Woman who is about to die whilst yet undelivered.

DR. REMMY says:—"Under circumstances such as these an effort must be made to save the life of the child, and, as a means accomplishing this, three plans have been suggested. They are—(1) To wait for the mother's death and then immediately to extract the child. (2) To do Cesarean section whilst the mother is yet alive. (3) To employ means to expedite labor and to extract the child by the natural passages as speedily as possible. REMMY then proceeds to discuss the relative advantages of these different modes of action. PRUSCHUBER's statistics show that when the mother is allowed to die before the child is extracted by abdominal section, only about 5 per cent. of the children survive. PUCH's statistics are somewhat more favorable; but there can be no doubt that the chance of obtaining a living child under these circumstances is very small. The performance of Cesarean section upon a dying woman, who is unable to give her consent to the operation, is undoubtedly open to sentimental objections. GUSEZNOV and MANASKE consider that the operation is justifiable under the following conditions:—(1) When it is clearly proved that the mother is about to die, and (2) that the child is alive. REMMY favors the plan of rapid dilatation of the cervical canal and extraction of the child *per vaginam*. Violent measures should be avoided, and the dilatation proceeded with as slowly as the condition of the mother will permit. The cervix may be dilated by means of Champetier de Ribes's bag, or by the hand alone. If traction is made upon the bag, dilatation may be produced in less than half an hour." —*Journ. de Med. de Paris.*

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

The Alkalinity of the Blood and Infection.

As the results of numerous experiments made on rabbits with a view to ascertain the influence of the alkalinity of the blood on diseases produced by the bacilli of anthrax, cholera, erysipelas, phthisis and typhoid, JOSEPH V. FUDON concludes:—(1) After infection with certain micro-organisms the alkalinity of the blood first increases and then more or less diminishes. (2) A distinct connection exists between the pathological condition of some bacilli and blood alkalinity. (3) It is not until after the diminution of the alkalinity to slightly acid conditions by an increase which becomes progressively higher that the infection; whereas in fatal cases the alkalinity is maintained and progressive. (4) The greater the alkalinity the more the resistance to infection. (5) The alkalinity of the blood and the power of the organism to increase the alkalinity of the blood are of essential importance in the outcome of infection.

The Role of Nervous Debility in the production of Fever.

STOCKHARD asserts that bodily or mental fatigue, indigestion, excitement pleasurable or of anger, or moral perturbation, which plays an established empirical role in the development of disease, may also retard recovery or aggravate such disease, but those factors that do not produce fever in a healthy person may and do produce fever in a sick person not directly by the perturbing influence but by the influence of the nervous system on the aggravated disease.

The Microbe of Scurvy.

TESTI and BERT have succeeded in isolating from a piece of scorbutic gum a micro-organism, which they believe to be the cause of scurvy. The microbe stain in all the aniline dyes resists Gram's stain, is perfectly round, and generally united with one or more of its kind. Its culture renders gelatine fluid, and gives rise to a sawdust-like deposit. Inoculation of these cultures into guinea-pigs and rabbits gave rise to fever, and the necropsy showed hemorrhagic stains in various parts of the body, and nodules of connective tissue new formation. Experiments were made in four cases, and in three out of the four the above-mentioned results were obtained; in the fourth case the authors attribute their negative results to the fact that the patient had improved considerably under treatment. The diplococci found by the authors differ considerably from any that are usually present in the oral cavity of man.—*Brit. Med. Jour.*

The action of Light on Bacteria

THOUGH not quite prepared to declare conclusively for all varieties of bacteria, Professor M. WARD corroborates the wisdom of the ancients as to the hygienic value of sunlight, for when he interposed a screen of potassium bichromate solution between bacteria and sunlight and thus cut off the blue ray of the spectrum, the microbes flourished as freely as they would in the dark. Similar results obtained with red, orange, yellow and ultra violet light; but violet light killed or injured a large number of the colonies, while blue rays of light or direct sunlight instantly destroyed the bacteria.

New Method for Detecting Tubercle Bacilli in Sputum.

IRKEWITSON claims the following to be the quickest and surest mode of diagnosing phthisis when the clinical signs are scanty:—8 minims of the sputum with 300 of water and 8 drops of 30 p. c. liquor potassæ are stirred together in a porcelain capsule and then heated till vapor forms, a little casein is now stirred in, 2 or 3 drops more of liquor potassæ added and the whole heated till the translucent fluid becomes milky in color, when it is transferred to a glass test tube and acetic acid added, drop by drop, till the albumen just begins to clot and the whole mixture is then churned for 5 or 10 minutes in a centrifugal brass cylinder. A deposit forms, carrying with it all the bacilli present. This is collected, rubbed between 2 slides, dried, fixed in the flame, stained after ZIEHL's method and examined under an oil-immersion lens for the presence of tubercle bacilli.

Variable forms of Bacteria.

THE theory advanced in 1889 by R. S. CHW of the possibility of errors being made in diagnosis owing to bacilli changing their appearance according to their nutrient media and their inherent qualities was received with mountains of ridicule; but E. KLICK, one of the most eminent of bacteriologists, now affirms that though like produces like bacilli not only take their own time and require suitable conditions to reappear in any one of a cycle of protean forms, but also present varieties in shape dependent on the medium in which they

grow and also on certain inherent qualities of themselves. His conclusions are based on observations of almost every known form of specific or pathogenic micro-organisms, and he further declares that under many conditions they have morphological characters of typical bacilli, but under other conditions they easily revert to or assume forms which, though trending often to misleading diagnoses, yet show their evident relation to the saccharomycos or other mycoid fungi.

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PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

Death in Bank-Notes.

ACCORDING to *L'Independence Belge* the cashier of a Viennese bank met with his death a short time ago under circumstances as remarkable as they are happily rare. Having to count a large number of used bank-notes, all more or less soiled and difficult to separate from each other, he incautiously, and in spite of a friendly warning regarding the risk he was thereby encountering, endeavoured to facilitate his work by moistening his fingers and thumb with his saliva. The same evening he felt a tingling pain in his lips, but did not pay much attention to this symptom, thinking it would pass away. The next morning, however, his mouth and tongue were hot and swollen, he began to feel alarmed, and without loss of time consulted a medical man, who is said to have forthwith incised the tumour. What the effects, immediate and remote, of this procedure were we are not told, the remainder of the history being briefly summed up in the following terms: "Notwithstanding the operation the patient died three days subsequently from the effects of the poison which he had absorbed." There are some points in this case, as set forth by our lay contemporary, which require elucidation. It is to be hoped, therefore, that an account from a qualified source will be forthcoming.

Wrapping Paper for Articles of Food.

THE city of Montpellier is said to be the first in France to adopt regulations concerning the kind of paper to be used for wrapping up articles of food. By a municipal decree, in force for some months, the use of colored paper is absolutely forbidden. Printed paper and old manuscripts may only be used for dried vegetables, roots and tubers. For other articles of food, new paper, either white or straw-colored, must be used.

The Alum Process of Sterilizing Water.

ACCORDING to Teich almost always diminishes the number of germs. Yet this is only temporary, for an increase soon results. Typhoid bacteria are not harmed by the process, which must not be relied upon to effect their certain removal from the water. Although alum can destroy cholera bacilli in time, the process is a slow one, lasting more than a day. Hence this (Baker) process is practically worthless.

Disinfection of Wells.

DR. FRANCK has brought under the notice of the Polytechnic Society of Berlin a means of disinfecting wells which he employs with success. It consists in suspending in the mouth of the well an earthenware dish containing 50 to 100 grammes (a gramme is about 15 grains) of bromine, which, being volatile in air, forms a dense vapour that fills the well and is absorbed by the water thus disinfecting it. The water has a slight taste of bromine for a time, but is wholesome.

Necessity of Frequent Visits.

THE Supreme Court of California (*Tobbs v. Myers*, 40 Cal. 355), in an action brought by a physician for professional services—the defence being that the visits were too frequent and not necessary—ruled that:

The writer has observed numerous instances of the physician who, in the effort to cure the patient, has placed the patient in a position of danger, and in the attempt to cure the patient has caused the patient to die. The writer has observed numerous instances of the physician who, in the effort to cure the patient, has placed the patient in a position of danger, and in the attempt to cure the patient has caused the patient to die.

It would seem, however, that the doctor to require a physician to be able to prove the necessity of each visit before he can receive his services. This is necessarily a matter of judgment, and one concerning which no one says the attending physician can decide. It depends not only upon the condition of the patient, but in some degree upon the course of treatment adopted.—*The Sanitarian*.

Penalty for Circulating False Reports.

THERE is a law in Florida which provides that "any person or persons who shall falsely or maliciously disseminate or spread rumors or reports concerning the existence of any infectious or contagious disease shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine in a sum of not less than \$100 nor more than \$1,000, or be imprisoned in the county jail for not less than three nor more than six months."

A Question of Responsibility.

Two men were suffocated in a cistern at Bristol last week under very unusual circumstances. Some defective drains were found in the house of a dental surgeon, and when the drain was opened, it was discovered that a rain-water pipe led directly into a cistern. The cistern was on the cellarage floor, and access was obtained to it by means of a man-hole. A pipe also led from a photographer's into the tank, and the chemicals used by him in his work would drain into it. It was advised to clean out the cistern and fill it up with rubble, so as to get rid of any nuisance, as well as the cistern itself. The contents of the tank were pumped out to about twelve inches from the bottom; this sediment the unfortunate men tried to remove, but they were quickly overcome by the sulphuretted hydrogen gas which was liberated by the disturbance of this sediment. They both expired before any assistance could be given them. This gas was the product of special chemical action by the percolation into the tank of the waste preparations used in the process of photography. At the inquest the coroner stated that there was no criminal negligence of any sort. Certainly the case is most exceptional, and the question of responsibility is practically incapable of solution.—*Lancet*.

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THERAPEUTICS AND PHARMACOLOGY.

Action of Antipyretics on the Blood.

HERSCOVITZ points out that one of the antipyretics most in use, namely, antipyrin, has a powerful haemostatic action. This property he claims to have discovered in 1884, in the course of some experiments with this drug. The haemostatic action is local and its mechanism is vaso-constriction and retraction of the tissues, with formation of a minute clot which is extremely retractile and aseptic. Antipyrin has also a favorable effect on coagulation. The action of antipyrin on the blood, when administered in toxic doses, may be summed up as a transformation of oxyhaemoglobin into methaemoglobin. A phase of anaemia or diminution of oxyhaemoglobin precedes the accumulation of methaemoglobin. In this period there is at the same time production and elimination of methaemoglobin; if elimination is hindered, as transformation is too rapid, phenomena of cyanosis may be produced which must be distinguished from those of the period of intoxication. These various phenomena may be studied haematoscopically, and the influence of antipyrin on

the blood may be observed by the use of the microscope. The writer has observed numerous instances of the physician who, in the effort to cure the patient, has placed the patient in a position of danger, and in the attempt to cure the patient has caused the patient to die.

Ready Method of Removing Foreign Bodies from the Throat.

THE following is a description of the method as practiced at the Göttingen clinic: The operator, standing on the left of the patient and facing him, places the ball of the thumb of the opened right hand upon the patient's throat between the place of the larynx and the sternum. He then repeatedly presses in the throat with a quick strong movement, at the rate of about one hundred times per minute. The results by this method have been very satisfactory.

Belladonna in Catarrh Caused by Potassium Iodide.

GEORGE COHEN, of Hull, has been able in three cases to stop the catarrh following the use of 10 grains (0.66 grammes) of iodide of potassium in 1 ounce (16 grammes) of water, by adding to this mixture 5 minims (0.32 grammes) of tincture of belladonna per dose in order to reduce the salivary secretion. It also counteracts the so-called depressant action of the potassium.—*Lancet*.

Varicose Veins treated with Ergot.

J. FERRIS reports two cases cured with fluid extract of ergot. One, a very bad case, but frequent hemorrhages, was cured in three months, without bandaging or any local application. He remarks that if the coatings of the blood vessels were strong enough to resist the blood-pressure there would be no varix; and to what extent the dilatation is compensatory is unknown. It is possible that the drug is so far reaching in its action, that it overcomes the cause as well as causes tonic contraction, thereby giving nature a chance to heal and strengthen the weakened parts.—*Amer. Med. Surg. Bull.*

Ichthylol to Abort Furuncles.

According to DR. CANTRELL, a 50 per cent. ointment of ichthylol applied thoroughly over the irritated part will usually abort a furuncle in about twenty-four hours.

Mixture for "Sluggish Liver and Indigestion."

R. Acid. Nitro-hydrochlor. (dil.) ℥ss.
Tinct. Podophyllin ℥ss.
Succ. Taraxaci ʒj.
Tinct. Nervi Vom. ℥ss.
Syrup Zingiberis ʒss.
Aq. Menth. Pip. ad ʒss.

S.—In water three times a day.

Cannabis for Itching.

MACKENZIE has found that Indian-hemp gives relief in cases of skin diseases, where the itching was not amenable to local means. The full effect must be produced promptly. For this purpose he employs the tincture in doses of ten drops, on sugar, repeated as often as necessary.—*Phil. Mag.*

Angina.

For simple angina Dr. Pepper prescribes—

R. Potass. citrat. ...
Potas. bicarb. ...
Ext. belladonna ...
Syr. marshm. ...
Aq. ...
M. Sig.: Take one or two drachms three or four times a day.

entrusting custody of the Honorable East India Company the British Government never engaged itself to do the Indian Government down to the 18th bits the H. E. I. Company used as bait to secure its men.

(2). Every private soldier carries a Marshal's baton in his keespake; but how many really smart Surgeons-Lieutenants or Assistant Surgeons may rise to Deputy Surgeon-General, for instance, except by seniority?

(3). As the Indian Medical Service was not created till long after the formation of the Hon'ble East India Company in A.D. 1700 while LANGDON, SETON and MOORE, three Civil (i.e., private) medical practitioners (adventurers if you like to call them so) who came to India as doctors to merchant-ships, not belonging to H. E. I. C., were appointed State-physicians to H.R.H. Prince Akbar, the Great (A.D. 1603) I fail to see how the service doctors were first in the field.

(4). *Otes toi que je m'y mette* cuts two ways, and though the Indian Government mother may tell her civil practitioner son "TOMMY make room for your UNCLE the service doctor," still the uncle has no right to live *sans souci* at TOMMY's expense on conditions not quite *sans peur et sans reproche* and as *defendant* TOMMY is perfectly justified in rejecting the *sauve qui peut* the UNCLE hurls at him for refusing to vacate his chair in favor of the UNCLE who is already occupying two more than he can properly fill or stretch himself to sit upon.

(4). There is no wisdom in telling a man what he already knows but does not find convenient to recollect even when his memory is jogged.

(5). When ALEXANDER the Great invaded India, he found it highly civilised (Before CHRIST). So also at the time of the Mogul and Mahomedan conquests and long before CLIVE was even dreamed of VASCO DA GAMA (A.D. 1428) landed at Calicut and wrote of India. "I have discovered a rich land of great culture and exceeding high civilisation." I think this disposes effectually of the vain boast of the British civilising India.

(6). If a man holding army rank ceases to be military because, co-existent with his army title, he is loaned to civil employ *all* he be recalled to military duty does a cavalry soldier become an infantryman or a civilian when his horse dies and he is obliged to fight on foot or wait for another animal from the remount stud?

(7). Will Surgeon-Lieutenant-Colonel C. H. JOUBERT kindly inform the profession how many I. M. S. officers are on the professor staff of:—The Calcutta Medical School, the City School of Medicine, the Vernacular Medical College, the Campbell School (excluding the Police Surgeon) and the Calcutta College of Physicians and Surgeons? All in this city.—NONE.

I have not anywhere denied the value of the services rendered to India by I. M. S. men such as COATES, MCCONNELL, RAY, PARTRIDGE, CUNNINGHAM, C. H. WOOD, MCKENZIE, McLEOD, KING, HARVEY, WARDEN, CHANDRA and LAWRIE, whose memories I appreciate and reverence as leading lights; but I do maintain that India has reached that stage of medical education and perfection which renders her quite capable of putting forward scientific men without indenting on the Indian Medical Service for teachers, and there is no reason why the plums in the giving of Government should continue to be reserved for the Indian Medical Service while the actual work devolves on the subordinate establishments.

Mr. FRANK HART did not show at the I. M. S. before the lay public. He made a cutting expert before the British Medical Association (not a lay society) and the journal of that Association (i.e., the *B.M.J.*) published Mr. HART's speech which the *Englishman* (a lay journal) reproduced, whereupon Mr. C. H. JOUBERT M.B., F.R.S., constituting himself champion for the entire I. M. S., writes a long letter to the *Englishman* in which ignoring the claims of the civil practitioners, he pitches into Mr. HART for daring to find fault with the errors of officialism, pokes fun at the poor old man, tells us he is himself some 32 years connected with medicine, and concludes by notifying to the general public that besides being a Surgeon-Lieutenant-Colonel of the I. M. S. he holds the much coveted and most thought of diploma of M.B. of London, and is a Fellow of the Royal College of Surgeons of England.

I certainly do not plead guilty to the charge of "repudiating the I. M. S. men as professional confrères," and though in upholding the principle of maintaining the prestige of the civil practitioner I decline to meet or call in the service men in bed-side consolation, still I entertain a very high opinion of the mental calibre and scientific attainments of very many of them, and candidly admit that those of them that I have had the pleasure of measuring lances with in medico-legal trials, were (though I won) worthy foes who tried my utmost skill and gained my admiration; but, for all that, honor compels me to stand by the church militant and battle with my pen and example until the civil practitioner obtains the privileges he has fully earned by passing his examinations and paying heavy fees for tuition in India.

So if, in fighting this terrible fight for existence and striving for recognition of the hard-earned rights of my class, I do happen to mention a few home truths, however unpalatable, about the monopoly by the I. M. S., I trust my service UNCLE, Surgeon-Lieutenant-Colonel C. H. JOUBERT, will not construe a public grievance into personality to himself; but that rising to his better nature he will try to help instead of crush his nephew.

CIVIL MEDICAL PRACTITIONER.

10th October 1895.

THE MEDICAL PRACTICE QUESTION IN INDIA.

TO THE EDITOR, "THE INDIAN PLANTERS' GAZETTE."

DEAR SIR,—As you are taking up in the *J. P. G.* the subject of the iniquitous competition of officers of the I. M. S. with private non-official doctors in the matter of practice, perhaps a few facts will be of use to you.

1. The present I. M. S. is the successor of the same service under the East India Company. The privilege of private practice, was assured to the Company's Medical Officers by Act of Parliament. It was this privilege which induced good men to accept the Company's service on the small pay offered. Medical officers who joined Government service since John Company became extinct and who now join had had to agree to accept any rules or changes the Secretary of State may choose to make. The rates of pay have remained the same or

been decreased, in any notion of the fall in value of the service. The Secretary of State has thought it advisable to withdraw the privilege of private practice from the service in general, though departmentally many restrictions have been placed on it with respect to numerous particular appointments.

It is an undoubted fact that most young doctors enter the I. M. S. with a view to civil employment and the private practice allowed. There are prize appointments in the service, which offer rather a fine career and good financial prospects from private practice. The London examinations always shew the Indian candidates to be superior to those who compete for appointments in the Army Medical Staff (British service). Were the privilege to be withdrawn only the most inferior men from medical schools would compete for service with native troops or civil appointments not carrying private practice.

2. "The I.M.S. at present consists of over 650 officers, of whom over 340 are in civil employ. The prize appointments are not numerous in proportion to these large numbers. All medical officers have to be content to work for years in small appointments, in small civil stations, where they get little more than their bare pay and have very hard work. Many never get beyond this stage, but have to content themselves with hope for the future. Where are the non-officials who would be content to establish themselves for life at Jessore or Rungpore or Burdwan or Berhampore? And what would they do when ill health, or wearing called for a change to Europe?

"In point of fact the outcry of the non-official against the official doctor applies only to the presidency towns and the coveted hill-stations. They want the kernels and are quite content to leave the husks to us.

Take then the presidency towns. Calcutta for instance. The hospitals, to which the non-official doctors claim to be appointed. These are all Government institutions, not private ones as in England. The charge of them forms only part of the duties of the official doctors, and Government has surely a right to select from its large service of 650 tried and experienced medical officers for these posts men who have proved themselves to be good and competent doctors. The alternative would be a choice from amongst perhaps half a dozen leading non-official practising doctors in Calcutta, for surely the lower grade of general practitioners would not consider themselves eligible out here any more than the ordinary general practitioners would at home. A London hospital surgeon or physician is always a man of high profession either *in esse* or *in posse*. But say Dr. B. or Dr. C. or Dr. G., non-official, is appointed to one of the Calcutta hospitals, and after a few years' work wants a year's furlough. Who is to replace him? The few eligible non-officials would hardly suffice for one of the large Calcutta hospitals.

"Private Practice.—There are at present 30 officers of the I. M. S. holding various civil appointments in Calcutta, and of these eight only have the privilege of private practice. Of the twenty-two debarred from practice, one only has the privilege of consulting practice. The eight others are to take fees from the public for other than their Government work, besides their hospital duties, have to

attend gratuitously all Government Civil Servants drawing more than Rs. 300 monthly, whether stationed in Calcutta or merely temporary in Calcutta, all Military Officers and their families living outside Fort William, all Chaplains and their families: they have to examine all candidates for Government service, all Government servants requiring sick certificates or applying for pension, all candidates for Government Post Office insurance.

"They are all senior men of large Indian experience, they are men who have come to the front rank of their service for special proficiency and attainments in particular lines of their profession or in special branches, they are the picked men of a picked service, and when they retire or go on furlough, Government has many other to replace them, as good or better than they. Is it wonderful therefore that the public has confidence still in these men, like to employ them as their family doctors, that insurance companies prefer to make use of their mature Indian experience to that of the new arrival in India, a young man perhaps who has been brought out as assistant or partner to an overworked non-official doctor, who wants a run home and has no one to leave in charge of his practice? Is it wonderful that banks, mills, firms, schools, public bodies generally still think that these selected eight senior men with their long years of Indian experience and the prudence acquired by official training are as good as or, possibly, better than the non-official doctor, who comes nobody knows from where or with what experience of India, and who may be here to-day and away to-morrow, whereas, as I have said, if the official practising doctor goes away, his patient feels sure that his successor will be as good a man or, if not, better than he. There is a certain sure continuity in one case and a total absence of certainty in the other.

"The cry against the official doctors in practice comes from the lower ranks of the non-official doctors from men who would be in the lower ranks in England, and none of the half dozen superior non-official doctors in Calcutta can say that they have not been treated with courtesy, generosity and total absence of jealousy by the practising official doctors in Calcutta. There is plenty of room and plenty of work for them, but when it comes to giving up our plums to them because they cry for them—plums that it has taken us 15 or 20 years to work up to in small ill-paid appointments—human nature steps in and we say no; as long as Government is satisfied that we don't neglect our official duties in the scramble for the wily rupee, and as long as the public chooses to honor us with their support and patronage, what we hold we will stick to and try to pass on to our successors, who are now toiling away in wretched mofussil stations in hopes of some day stepping into our coveted shoes." Yours, &c., ABDI ALTERAM PARTEN.

[Our correspondent's argument are based chiefly upon service traditions. He finds it necessary to go back to the days of Old John Company, to justify this objectionable system of monopoly. He falls back on the old traditional notion that the Service is one of "picked men," and from this "picked" assembly, "special picks" are made for the Service "plums." No one outside the Service could possibly do the work done by the Service. We have felt very strongly about this monopoly question for years, and we can assure our readers that our correspondent is absolutely in the dark when he says the

agitation. The Public Health Board has "taken the matter into consideration." We know for a fact that the whole non-official profession is deeply grieved, for matter of that, in India, is in sympathy with our views on this subject, and the feeling for reform on the lines we have indicated is universal. Our correspondent is unfair to those private practitioners who have by their pluck and hard study made names for themselves and gained a very firm and popular footing not only in Calcutta, but in Madras and Bombay.

In our remarks we protest against being misunderstood. We are directing our energies against a system of medical abuses that amounts to a public scandal. We have no desire to enter into personalities, and we will not do so. If we are compelled to isolate an office or special appointment, to give definiteness and point to our remarks by way of an example, we trust we shall not be misunderstood and our meaning misconstrued into personalities. Scores of extra copies of our journal containing our article on "The Medical Practice Question in India" have been bought by doctors throughout Bengal and Assam, with the object of sending them home to friends and members of Parliament, and this fact alone bespeaks a deep and general interest in this very important public question.—Ed., I. P. G.]

THE ILL-PAID HOSPITAL ASSISTANTS.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—It does at first sight seem surprising, and is to be regretted that up to now only 40 or 50, of the Civil and Military Hospital Assistants have joined the Indian Medical Association whereas some hundreds ought to have swelled the rolls. But what can be done?—charity begins at home, and the mind is willing enough but the purse is too tight. Stomach must take the front rank, while philanthropy brings up the rear.

For some time past I had been putting domestic economy to a severe test, so as to spare the small subscription necessary to enable me to join the Association, but month after month there was the same "deficit in my household budget" and I could not make both ends meet.—Of course dreaming of the "Hospital Assistant's Memorial" for the little would-be-increment of pay and pension is hoping against hope.

However it is true that all of us Hospital Assistants made a special effort to immediately join the Association, even at the sacrifice of a few necessities of life that we may try to do without—we possess no luxuries.

Yours, &c., M. A. A.

SIR,

INFORMATION WANTED.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I shall be extremely thankful to know whether Surgeon-Captain ROBERT HENRY ELLIOTT, M.B., B.S., London F.R.C.S. England & F.R.C.S. Cambridge, &c., I.M.S., acting Professor of Biology, Presidency College, Madras, is the same as or is identical with the Surgeon-Captain Elliott who is now appointed Ophthalmic Physician, Surgeon, and Oculist at the Presidency of Madras, and his whose hands so many millions of eyes are entrusted.

Yours, &c., JOHN ANDERSON.

GOVERNMENT OF INDIA.

Surg. Capt. U. R. James, I. M. S., is placed at the disposal of the Punjab Govt. from 30th July 1895.
Vet. Lieut. E. W. Lardner, C.V.D., is transferred to Punjab from 15th Sept. 1895.
First class Mty. Asst. Surg. George Gill is granted 600 days' furlough from 18th Oct. 1895.

PROMOTIONS.

To be Sarg. Lieut. Col.—J. W. Clarkson and J. Parker, M.D., from 30th Sept. 1895.
To be Sarg. Maj.—G. J. Barkin, M.B., from 30th Sept. 1895.

BENGAL GOVERNMENT.

Leave has been sanctioned as under:—

Brig.-Surg. Lieut. Col. C. J. W. Meadows, 6 months' special leave. Sarg. Lieut. Col. J. O'Brien for 6 weeks from 23rd Sept. 1895 and C. H. Jonkers for 40 days from 6th Oct. 1895. Sarg. Capt. J. R. Adie six months' extension of leave w.o. without pay. Asst. Sarg. Pransha Nath Banerjee for 1 month and 15 days and Chander Mohan Ghose for 3 months.

H. I. and R. H. the Queen has ordered the following gentlemen to be admitted to the I. M. S. as Sarg. Lieut. from 29th July 1895:—John Stephenson, Frank Needham Windham, Walter Barrie Turnbull, Ernest Edwin Waters, Asher Lavanton, Philip Francis Chapman.

The following appointments are ordered:—Surg. Maj. A. Tomes to act as Prof. of Surgery, Med. Coll., Cal. Surg. Capt. B. Bird to act as Prof. of Anatomy Med. Coll. Cal., F. J. Drury to act as Prof. of Midwifery Med. Coll., Cal. Asst. Surg. Preumber Mitter to Pres. Genl. Hosp. Calcutta; D. N. Mitter to act as Teacher of Anatomy to the Campbell Med. School; Behari Lal Chakravarti to act as Rees. Surg. Med. Coll. Hosp.

PUNJAB GOVERNMENT.

Privilege leave is sanctioned as under:—

Surg. Maj. G. W. P. Dennis for 2 months from 5th Sept. Surg. Capt. R. B. C. Barber for 16 days from 3rd Sept. First class Hosp. Asst. Paramasand, 6 months from 31st Aug. 1895. Second class Hosp. Asst. Hira Singh, 3 months from 16th Sept. 1895; Muhammad Aslam, 3 months from 14th Sept. 1895; Rakh Ram 20 days from 31st Sept. 1895. Third class Hosp. Asst. Ameer Khan is entitled to the higher pay of his grade from 8th Sept. 1895.

The following appointments are made:—

Surg. Maj. O. H. James to be placed at the disposal of the Punjab Govt. from 29th July 1895; Vet. Lieut. E. W. Lardner, C.V.D., is transferred from Bombay to the Punjab command; Dr. D. N. P. Dutta to off. as Civil Surg. and Supdt. Lunatic Asylum, Delhi, from 5th Sept. 95 etc. Surg. Maj. G. W. P. Dennis on leave. Asst. Sarg. Khuran Chand, off. Civil Surg. Bikaner, from 2nd Sept. 1895; Babu Ditta for genl. duty Amritsar from 22nd Sept. 1895; Balu Singh, Gujranwala Dist., from 15th Sept. 1895; Bishen Das to Lalay Nana Hosp. N. W. Ry. from 15th Sept. 1895; Sodhi Karm Singh to genl. duty Amritsar, from 15th Sept. 1895; Lachman Das to the Mayo Hosp., Lahore, from 20th Sept. 1895. First class Hosp. Asst. Masadi Mal to genl. duty at Rawal Pindi from 30th Sept. 1895; Second class Hosp. Asst. Humaid Bakshi to Miani Dargy, Multan Dist., on 2nd Sept. 95; Third class Hosp. Asst. Abdul Samad to N. W. Ry. Hosp. on 1st Sept. 1895; Ramjan Bat for genl. duty at Multan from 2nd Sept. 1895; Asst. Singh for genl. duty at Multan from 11th Sept. 1895; Mohi Ram for genl. duty at Jalandhar from 2nd Sept. 1895; Ghansh Das to Ludhiana Travelling Disp. from 15th Sept. 1895; Karam Singh to Gujranwala City Hosp. from 15th Sept. 1895; Abdul Rahmand Khan to the N. W. Ry. Branch Disp. Faisalwar from 27th Sept. 1895.

Medical charges were assumed as under:

Surg. Maj.—C. J. Barkin, of Punjab, from 30th Sept. 1895. Surg. Capt. J. W. Clarkson, of Punjab, from 30th Sept. 1895. Surg. Lieut. Col. J. O'Brien, of Punjab, from 30th Sept. 1895. Surg. Capt. J. R. Adie, of Punjab, from 30th Sept. 1895. Surg. Lieut. Col. C. H. Jonkers, of Punjab, from 30th Sept. 1895. Surg. Capt. J. W. Lardner, of Punjab, from 30th Sept. 1895. Surg. Lieut. Col. J. O'Brien, of Punjab, from 30th Sept. 1895. Surg. Capt. J. R. Adie, of Punjab, from 30th Sept. 1895. Surg. Lieut. Col. C. H. Jonkers, of Punjab, from 30th Sept. 1895.

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Wesleyan University

Sir,—In reply to your letter of the 15th inst., I have to inform you that you will be required in order to obtain the L. E. C. P., or the R. O. S. to pass the second examination in Anatomy and Physiology as well as the final exam. in Med. Surg. and Med. Geo.

4. Of having obtained the Licence in Medicine and Surgery of the Bo. University.

I am, Sir, &c.
FREDERIC G. HAMLET,
Secretary.

ACKNOWLEDGMENTS

We acknowledge with thanks, receipt of the following:

Journals.—Lancet—British Medical Journal—Birmingham Medical Review—Medical Times and Hospital Gazette—Temperance Record—Universal Medical Journal—Medical Age—Medical Bulletin—Medical World—Good Health—Medical Brief—Australasian Medical Gazette—American Lancet—Toledo Medical Compend—Chemist and Druggist—Canadian Practitioner—Indiana Medical Gazette—Ceylon Medical Journal—Medical Reporter—Nursing Record—Clinical Journal—Journal of the American Medical Association—Medical News—Sanitarian—Medical Week—Indian Medico-Chirurgical Review—New York Medical Record—New York Medical Journal—Edinburgh Medical Journal—Virginia Medical Monthly—Pacific Medical Journal—Provincial Medical Journal—Ganjin Tibbat—Gaillard's Medical Journal—Calcutta Journal of Medicine.—Scalpel—The Practitioner—Medical Mission—The Englishman—Philadelphia Polyclinic.

Gazettes of the Governments of India, N.-W. F. and Oudh, Bengal, Central Provinces, Bombay, Punjab, Burma and Assam—General Orders by His Excellency the Commander-in-Chief of India—Notifications from the Surgeon-General with the Government of Bombay.

Newspapers : Indian Daily News—Rangoon Gazette—Express—Indian Witness—Indo-European Correspondence—Morning Post—Indian Engineering—Eastern Guardian—Catholic Watchman—Western Wit and Wisdom—Indian Empire—Tribune—Indian Pioneer—Gazette—Times of India—Bombay Guardian—Anglo-Indian Advocate—Indian Mirror—Bengalee—Amrita Bazar Patrika.—The Sentinel—India—Panjab Patriot—Indian World—Calcutta University Magazine.

Literary Contributions and Letters from:— Brig-Surg.
Lieut. Col. Thomas Holbais, Hendley, C.I.M.S., I.M.S., *Ben-
galee*; Rai Kanna Lal Dey Bahadur, C.M.C., S.M.S., *Cal-
cutta*; Surgn.-Maj. A. Duncan, M.D., F.R.C.S., I.M.S., *Ben-
galee*; Surgn.-Capt. Patrick Hahar, M.D., F.R.C.S., F.R.A.C.S.,
D.S.N., *Hyderabad*; S. J. Mulla, C.A., *Calcutta*; Rai
Pate Ram Bahadur C.M.S., *Simla*; James R. Wilson,
M.D., L.M.C.P. and S., L.M.S., *Calcutta*; Chaitanya Ghosh-
sain C.M.S., *Hyderabad*; Kailash Ch. Ghosh,
M.D., C.M.S., *Kanpur*; Surgn.-Lieut. Col. C. S. Patil,
M.D., *Calcutta*; and others.

The Treasurer Indian Medical Association asks that the following gentlemen who claim to have paid their subscriptions to the Association will very kindly send him a post card noting on it the number of his receipt for same or the postal receipt for the money sent—
Asst. Surgeons M. Verghese, J. S. Kerr, D. Francis, S. Killoway, Jogendronath Biswas, Messrs. C. K. Moodooosothana Rao, V. Chinnasawmy Pillai and P. B. Subanathar and Dr. C. A. Owen.

J. J. B. (Mean Mir).—Your paper has been received.

C. F. (London).—The two pictures have appeared.

G. C. C. (Calcutta).—We have received your subscription for the R. S. Coates Memorial Fund, which will be acknowledged in due course.

F. H. has received the following answer from the R. C. S. and P., London, in regard to a query as to the examination required for an L. M. S. of India to obtain the diploma of the R. C. S. and P., London :-

ORIGINAL ARTICLES.

PERSONAL HYGIENE.

DR. S. J. MÜLLERS, D.M.S.

Brissellique.

Continued from page 315, Vol. IX.

WATER is needful for every animal and vegetable, and without it both would die. The greater part of our bodies consists of water. If a man weighs 150 lbs., the water amounts to about 112 lbs. When we eat, our food first becomes like a pulp in the stomach. The useful part, chyle, somewhat like milk, is changed into blood, while the waste part is sent out. The blood goes through little pipes to all parts of the body for their nourishment. If there was not enough water, the blood would be so thick that it could not flow through these little pipes, many of which are far finer than a hair. The water we drink passes into the blood and then goes to every part of the body. If the water is bad, our health must suffer. Water is also useful for cleansing our bodies. This takes place not only when we are washing ourselves with it, but by day and night it is slowly pouring out in the form of perspiration through millions of little drains in the skin.

Sources of water supply.—(1) *Rain* is the greatest supplier of water. The heat of the sun causes water to rise in vapour which is changed into dew, rain or snow. Rain, as it falls, is nearly pure but becomes impure by coming in contact with the roofs of houses, whence it washes down dust, dung of birds, bones, &c. When the rain runs along the ground it gathers mud and decaying matter.

(2). *Rivers* usually contain good water, but during the rains, they are muddy. This water, however, clears when allowed to stand for some time, or it may be quickly purified by the addition of a little *alum* or the well-known clearing-nut, *strychnos potatorum*, (Tamil *thakankotai*.) Washing clothes or cattle in rivers tends to pollute them. People often use the banks of rivers as latrines, and the rain washes the filth into the stream. Dead bodies (even of people who die of cholera or small-pox) are sometimes thrown into rivers which also receive the ashes of crematories. Thus rivers, the sacred streams not excluded, are frequently used as places into which filth of any kind may be thrown; but the harm is much greater when (as is often the case) there is only a very small stream with scarcely any flow.

(3). *Lakes* contain excellent water; but water from a lake in a *marsh* or *jungle*, even though it may look pure, generally contains decaying vegetable matter, which is apt to cause malaria.

(4). *Tanks* are a fertile source of trouble, as they contain standing water which is easily polluted. People bathe in them, rinse their mouths and spit into them, wash their clothes and cooking pots in them, and cleanse themselves in them after using the bank as a latrine; cattle and swine lie in them; and plants are frequently steeped in them. Yet water is taken from them for drinking and cooking.

(5). *Wells* supplied by water very deep in the soil, are good; but those depending upon water near the

surface are wholly bad. The ground is often full of filth, which has been gathering for ages, and water passing through it is polluted. A common fault with water wells is, that they are devoid of protecting walls, and water charged with all sorts of abominations is allowed to run back into them to pollute the whole supply.

Hurtful effects of bad water.—Of all diseases *fever* kills the most people, and its most frequent cause is decaying matter in water. Statistics show that bowel complaints produced by unwholesome food and bad water carried off nearly three lakhs of persons in 1865. Deadly outbreaks of disease have been traced to polluted matter from a cesspit draining into a well. Cholera is still a pestilence, but its ravages have greatly diminished in those towns whose water supplies are looked after. The Madras Sanitary Commissioner says in one of his reports: "An improved water supply is the greatest sanitary need of our Indian municipal towns. Until the frightful water contamination, which at present prevails is overcome, all our other efforts are almost nugatory."

How to get pure water.—Impurity is to a certain extent inevitable, and is neither disagreeable to the taste nor injurious to the health. Though a good water is not necessarily chemically pure, it is one which is transparent, colorless, odorless and tasteless, and holds a sufficient amount of atmospheric air, in solution, but does not contain suspended matters, or excess of total solids or of any particular substance dissolved in it. Sometimes a water will look clear and bright and be impure. A well in London, noted for its bright, sparkling water, was near a graveyard, and when examined, was found to be very unwholesome. Water is called "*hard*" when it contains too much lime or other mineral matter; and "*soft*" when the minerals are small in quantity or absent. Soft water is best for cooking and washing, and there will be a saving of firewood and soap, besides time. The large towns of England have pure water running through the streets in pipes. A few towns in India also are thus provided with water at present, and in course of time others will be supplied.

River water from large streams is generally the best, as it usually purifies itself by being turned over and over and being freely exposed to the air. The quality of *tank* water, which is rain water, filtered through the soil, depends upon the position and the care taken. The water of tanks which dry up or get very low in the hot season is unwholesome. Fish and living plants in tanks do good, but dead leaves and decayed plants are hurtful, and no sort of filth should be allowed anywhere near a tank lest it be washed into it by rain or soak into it through the ground. Tanks set apart for drinking water should be watched to prevent their being polluted. Another large tank should be reserved for bathing, washing, and watering cattle; but even here care should be exercised, as clothes washed in dirty water do harm, and good water is just as necessary for beasts as for man. Many of the diseases cattle suffer from (such as worms) are really due to bad water. Wells should be surrounded by a wall that slopes outwards, so that any water spilled on it may run off; and bathing

* For a fuller account of these matters the reader's hand-book of water analysis and purification, obtainable at this office.—E. M. S.

or washing should not be allowed near wells, nor should trees overhanging them, as leaves may fall into the water and decay. A cover would be a great protection to a well, and clean vessels and ropes should always be used in drawing water. Now and then wells should be cleaned out and any broken pots or fish that have fallen into them carefully removed.

Campfires should not be permitted near a well, and the proximity of filth is very harmful, as water absorbs bad odors. The vessels in which water is kept or drawn should be scrupulously cleaned every day. Any person who has had small-pox or other infectious disease should not be allowed to wash himself, nor his clothes in any tank, or near any well, used for any domestic purposes. Wells sunk in granite yield pure water, but the neighbourhood of burial grounds, cesspools, sewers or ill-constructed surface-drains, nullahs (invariably used as latrines), tanneries and slaughter-houses, unclean dwellings, stagnant surface-pools or tanks in which people or animals bathe or clothes are washed, fields which are freely manured, should be avoided in choosing a well for domestic use.

Purification of water.—Pure water should be obtained, if possible, and kept pure after being well boiled, as boiling destroys any live poison capable of creating disease. This is especially necessary when fever or cholera is prevalent. Filters, if properly made and kept clean, are useful, but if dirty they add to the impurity of the water. Common filters are formed of three earthen pots, one above the other, each covered with a perforated earthen lid and supported by a tripod of wood or iron. The two upper pots, provided with small holes in their bottoms, loosely plugged with cotton banting or a straw, are half filled with a mixture of clean sand and charcoal, the lowest of the three receives the filtered water. The sand and charcoal should be frequently replaced by fresh clean materials and the pots cleaned out. If fresh sand and charcoal cannot readily be obtained, they can be rendered fit for use again by being thoroughly heated. The earthen lids should always be kept on to prevent flies and dust from getting in.

WHAT IS REMITTENT FEVER? *

By N. N. KATRAK, L.M.S.,
Bombay.

In the Mortuary Returns of the Health Officer for the city of Bombay for the year 1893-94, it is stated there that 21 deaths are due to enteric fever, 831 to simple continued fever, 262 to ague, and 4,730 to remittent fever. The question arises what is meant by remittent fever. It is well-known that intermittent fever becomes exaggerated and intermissions are converted into remissions, but these cases yielded to quinine as readily as the ague; besides during the remission, though the temperature does not go down to the normal, still there is a considerable descent from the highest point reached, and symptoms are abated during that period; but such cases are few and far between. The bulk of them does not yield to quinine, nor do the symptoms abate during remission. It is a misnomer to call the little dip in the temperature

which we find in these cases a remission. There are slight variations and trifling intermissions, but it is not a continued fever, hence they cannot be of the nature of ague, i.e., amenable to quinine, and constituting the same bodies (LAFERAN'S). That these cases were hitherto, and even now are by some, regarded as due to the same poison as that of the ague is evident from the fact that large and even heroic doses of quinine were, and in some cases even now are, administered in such cases; but this practice is becoming less frequent every day. Again, those cases of remittent fever, which do not yield to quinine, are by some regarded as cases of typhoid fever, as will be seen from the following para. quoted from SIR WILLIAM MOORE'S "Diseases of India," second edition, page 285:—

"Deputy-Surgeon-General Pinkerton, several years the able Surgeon to the European General Hospital, Bombay, states he is quite sure that what we now call the enteric fever has existed over 50 years in Bombay, and has been known as 'the 21 days bad Bombay fever'. The same authority informs me of his opinion that the disease is in every respect as in Europe, and that it has no connection with malarial fever, taking ague as the type; also that enteric fever exists all over Western India, killing an enormous number of natives under the name (in the Mortuary Returns) of remittent fever or simple fever. With Dr. PINKERTON'S views as to the indefinite existence of enteric fever in Bombay, as to its being the same phase of disease as seen in Europe, and as to its causing great mortality among the natives I fully agree; but I believe it to be simply a phase of fever and not a specific disease of pythogenic or miasmatic origin.

This opinion, however, does not seem to have received universal acceptance, as in the Sanitary Commissioner's Report the bulk of cases are still included under the heading of remittent fever. Even among European troops the admissions for enteric fever were only 1,362, as against 22,749 for remittent. Among the native troops only 33 admissions are put down for enteric fever, as against 54,347 for remittent fever. Again, in well-conducted hospitals, such as the Goculdass and the J. J. Hospitals, the proportion of typhoid fever to remittent fever is extremely small. In the Goculdass Tejpaui Hospital from 1888 to 1892, no admission has been recorded under the head of enteric fever; whereas for the same period the admissions into the J. J. Hospital are 17 cases of typhoid fever, as against 2,526 of malarial. I believe that it might be safely said that the bulk of the remittent fever cases cannot be and are not regarded as cases of typhoid fever in accordance with the views of Surgeon-General PINKERTON and Sir WILLIAM MOORE. Then the question still remains What is remittent fever? It is by some regarded as modified typhoid; but to say the least, the term is very vague. It is not quite clear what the term modified typhoid fever means. It may mean that the germ is the same germ, namely, Eberth's, but it does not produce the same symptoms as are found in the true enteric. But the presence of this germ in cases of remittent fever has not yet been established, and it is not quite clear in what way the system has been modified to produce different symptoms, and it is open to question whether, in the absence of enteric ulcers and characteristic eruptions, it

* Being a paper read before the Indian Medical Congress and sent to the Record for publication.

is quite justifiable to call it typhoid. Again, it may mean that the germ is modified, that is, it may be a stronger or weaker germ, in which case we should expect the symptoms to be more or less pronounced, but of the same nature. It is, however, found that this cannot be the case, as true cases of typhoid fever are produced, and the germ, that is, typhoid bacillus, is obtained in India. So modified typhoid as a scientific expression must be discarded. Others name it typho-remittent fever, implying thereby that the poisons of typhoid and of malaria enter the body at one and the same time and produce their combined effects, and that according as the one poison is more active than the other in the system, the symptoms produced by that poison predominate over those produced by the less active poison. It is not quite clear which of the signs and symptoms in a case of remittent fever are to be attributed to malarial poison, and which to typhoid poison. Broadly speaking, fever symptoms may be divided into general symptoms and special symptoms. General symptoms are common to pyrexia, such as heat of the body, frequency of pulse and respiration, interference with the functions of the various organs, and disturbance of the nervous system, such as headache, pains in the body, and in severe cases acute or low delirium and typhose condition. The special symptoms are the course of the fever, temperature chart, the onset and the termination and specific lesions. Now typhoid fever will produce the same general symptoms as those of malarial fever. They are, however, more violent, because the temperature is higher and more persistent, and the poison is of a more virulent character. The special signs and symptoms are enteric ulcers, peculiar eruptions, peculiar character of stools, and a period of 21 days. There is also to be found typhoid bacillus. In malarial fever, the special characteristics are the peculiarity of the onset and the decline, the three characteristic stages, the cold, the hot and the sweating, the periodicity and the amenability to quinine, and there may be found Laveran's bodies in the system. If the term typho-remittent is to be applied to these cases of remittent fever which do not yield to quinine, the question arises, where is the combination of the symptoms? All the symptoms special to the malarial fevers, namely, the three stages, periodicity, as well as the amenability to quinine, are entirely wanting, nor do we meet with enteric ulcers or the peculiar eruptions. Even the period of 21 days, though present in some cases, is not universally found. This term is also inapt, inasmuch as it puts one on the wrong scent, and is based on unsatisfactory data. My impression is that the term at one time was applied to cases of remittent fever, in which typhose condition supervened; typho then was an abbreviation of typhose condition, and not of typhoid fever. This view that the remittent fever (excluding cases purely of an ague type) is due to the two poisons getting into and acting in the body at one and the same time is in my opinion untenable. The question then still remains unanswered, i.e., what is remittent fever? To me it appears that it is a distinct fever entirely different from malarial remittent on the one hand and the enteric on the other. It is in many cases found that the beginning of this fever dates from the inhalation of sewer gas.

In many cases, wherever it was possible, I have elicited from the patients the important information that the beginning of this fever was due to this gas. This is what the patient says: "Returned home as usual with nothing particular added in the daily routine; all of a sudden got a bad smell that made me uncomfortable; after that I felt some vague but trifling pains in the body and unaccountable depression. This state of things lasted from two to four or more days." After which the course of the fever is as follows: He begins to feel hot, without any shivering or rigor, temperature in the beginning does not go above 101° F. and continues with slight variations to rise till the fifth day, when generally it reaches its highest point which is sometimes as high as 105° F. It then continues with variations of a degree or two. At this height for about six days in some, eight in others, or fourteen or twenty-two in the rest, when it terminates by lysis. It will be seen that the full course varies from eleven days to twenty-eight days accordingly to the course it gives. We have four varieties of eleven days, fourteen days, twenty-two days and twenty-eight days. It is accompanied from the very beginning with extreme physical discomfort and prostration out of proportion to the height and duration of the fever. Sometimes there is acute delirium, followed by low muttering delirium in fatal cases. There are no eruptions and no abdominal tenderness or gurgling, stools when passed are healthy, and the face is pinched instead of having the bright circumscribed flush. There are also other symptoms of an adynamic character, such as are found in other cases of fever. This sketch will shew that, except that the temperature chart is to a certain extent similar to that of typhoid fever in some cases, though not in all, there are no symptoms which are found in the enteric, nor are there any symptoms which can be referred to a malarial origin. As I have said above, this fever is a distinct though unnamed fever, caused by some poison of microbic origin conveyed by sewer gas. It is possible that in the decomposing animal dejecta pathogenic germs of more varieties than one may be present, and that the fever we are considering may be due to the one or to the other, but it is not identical with the typhoid poison, nor has it any connection with the poison of the fever of the ague type. It may be said that this is a question more of an academic character, but even if it were so, in the interest of science, we would be perfectly justified in finding out the truth about this matter. However, it has a practical significance of a most important character. If the case should be of a malarial origin, one would be justified in pushing quinine to its fullest extent; if not, one is not justified in dosing his patient with a drug which has, in large and heroic doses, a depressant and injurious effect. If it is typhoid fever, one has to be very careful about the diet of the patient. If it is a distinct fever by itself, as I regard it, then our duty lies in striking out a new path, if possible. This question was discussed in Bombay in a series of meetings of the profession convened by the Grant College Medical Society, and has been referred to a Committee, and it is to be hoped that the investigation of the Committee will be of a decisive and practical character.

The conclusion at which I have arrived is that the cases included under the term of remittent fever cases are not

all has to one and the same cause. There are a few true resistant fever cases of the ague type, which readily yield to quinine. The bulk of these cases, however, are due to other cause of a malarial origin, which has its habitat in decomposing animal deposits, and that there are probably more than one variety of these germs which produce more than one variety of cases.

THE ADVANTAGES OF TOTAL ABSTINENCE.*

By SURGEON-MAJOR G. F. POYNTER, A.M.S.

Madras.

As educated professional men, we are required to see if there are any advantages in total abstinence either for ourselves, or for our patients; to discuss the subject in all its bearings, as far as possible with unbiassed minds and to adopt that which we honestly feel may be profitable either for ourselves or for those who desire our opinion professionally. Now I am fully aware it is not, as a rule, a very strong case that requires a negative argument for its proof, but nevertheless it is a very useful form of argument, and one that sometimes carries more weight, and is more likely to convince than a direct argument in favor of the points you wish to prove. I propose to adopt this form of argument at first and shall endeavour, as far as possible, to point out some of the disadvantages of drinking alcohol habitually before drawing attention to the advantages of total abstinence.

All the fermented liquids commonly used as beverages, contain ethylic alcohol in varying proportions, and in consequence their action on the human body varies in proportion to the ethylic alcohol, the various constituents and adulterations that these liquids contain. The chief constituent of all fermented liquids which must claim our attention is the alcohol, as it is to this substance that they owe those properties for which they are drunk.

Alcohol is the result of fermentation, which says LIEBIG, "is nothing else but the putrefaction of a substance containing no nitrogen." Ferment or yeast is a substance in a state of putrefaction, the atoms of which are in continual movement. In order to prevent this fermentation turning the liquid into vinegar, the ingenuity of man steps in, and by heat or some other method stops the process at the proper moment. The making of wine has been aptly described as a chemical process, as the albumen in the grape juice unites with the oxygen in the air, and is converted into yeast, this yeast in the vinous fermentation resolves the grape sugar into alcohol and carbonic oxide. Now let us see how this alcohol acts on the human system. If moderately diluted it is a slight irritant to the mucous membrane of the mouth, pharynx and stomach; increased in quantity, it has a reflex action on the circulation, and if largely given may cause death by bringing about a sudden rise of blood pressure, and by arresting the heart in diastole. It has also in smaller quantities, an anæsthetic effect on the nerves of the stomach, this probably accounts for the fact that it is, at times, useful in irritable conditions of that organ. Nearly the whole of the alcohol consumed is absorbed by the capillaries of the stomach and carried in the blood to the liver, where it becomes more concentrated

than when it has passed through other parts of the body. Therefore, we find that its effects are more marked on the liver than on other organs, and we get degenerative enlargement and fatty degeneration of that organ, as the result of direct interference with the liver cells and the transformation of the connective tissues, from a permeable tissue into a dense more or less impermeable tough structure, resembling parchment.

Alcohol, further, prevents the absorption of oxygen and the exhalation of carbonic dioxide from the blood. DR. PROUT states: "Alcohol in every state and in every quantity uniformly lessens in a greater or less degree the quantity of carbonic acid gas eliminated, according to the quantity and circumstances in which it is taken. When taken on an empty stomach this effect is almost instantaneous, but is probably greatest three hours after taking the alcohol. It must interfere therefore to some extent with the purification of the blood, and check all functions which require oxidation for their performance."

Alcohol at first, increases the contractions of the heart but later there is flagging and weariness due to the extra work it has to accomplish. This may be the paralyzing influence of alcohol on the vasomotor centres, the calibre of the arteries and capillaries increasing greatly a larger quantity of blood is required to fill them and the heart, consequently, has extra work to pump more blood into the enlarged channels.

On the brain and higher nerve centres the physiological action of alcohol is well known, and of great importance. These appear to be paralyzed in the inverse order of their development. The power of self-control is lost, the muscles which act almost, if not quite, automatically in the ordinary duties of every-day life become erratic and the power of co-ordination is lost. Increase the dose, and only the involuntary functions are performed, these in their turn are extinguished to be followed by profound coma and death as the result of large doses taken in quick succession. Small doses taken habitually, for years, produce anatomical changes. DR. DICKENSON pointed out that alcohol replaces more actively vital material by fat and fibrous tissue and substituting suppuration for new growth promotes caseous and earthy changes to help time in producing the effect of age. In a word it is the *genius of destruction*. DR. ALFRED CARPENTER says: "It is virulent poison, and as such should be placed in the list with arsenic, mercury and other drugs." These are strong words, but when we study the subject and see its effects on cellar-men, inn-keepers, brewers, &c., whose occupation or calling brings them constantly in contact with alcohol, e.g., although they may be strictly moderate drinkers, we realize that alcohol is indeed "the genius of destruction" to them and though it may not itself be the cause of their death, it certainly renders them more liable to contract disease, and less able to fight against it, when once prostrate, than are those who never take alcohol. The power of resistance of habitual alcohol drinkers against morbid action is lessened by the action of the alcohol on the blood and tissues of the body. This is due to the power it has of preventing the absorption of oxygen and the exhalation of carbonic oxide and, as long ago pointed out by HANDBY, SCHMIEDER and FREUZ, is the action of

* A paper read before the S. I. Branch of the British Medical Association and sent to the Record for publication.

...the system is to become a cause of disease. The action of ethyl alcohol causing a tremor of the smallest movements of the white blood corpuscles, coupled with the fact above noted, accounts for the suppurations so common amongst those addicted to the free use of alcohol, and the difficulties encountered when treating them for disease or injury. If we acknowledge that alcohol has these deleterious effects on the body in health, we have no difficulty in seeing the disadvantages and danger of taking alcohol habitually. It is an advantage to give it as a medicine occasionally, to prevent the too rapid oxidation of tissue material, but I am of opinion that it should be used much more sparingly as a medicine than it is now, even though it is not prescribed in quite the same liberal manner it once used to be.

At the Lock Hospital in London, I was informed that of a number of selected cases, treated in exactly the same way, except that half had alcohol in one of its forms while the other half had none, the latter recovered more quickly than those who had the alcohol. Its deleterious effects on rheumatism, gout, and gonorrhoea, are also well known, and yet how many, apparently forgetful of these effects, order it very freely in this class of cases. Perhaps as a luxury in health it may be used extremely moderately without causing any very apparent derangement of the tissues of the body, but nevertheless it should be used very cautiously, and certainly forbidden to those who inherit any tendency to excess. It is not a food in the true sense of the word, for a food should build up and replenish all the tissues of the body without being hurtful to any, which is not the case with alcohol. Numerous statistics and observations have proved that alcohol habitually taken is harmful in the tropics, nor is it less harmful in the cold of the Arctic regions. Experience coupled with experiments, extending over lengthened periods and carried out by able and careful observers, show that men can do more work and endure greater hardship without alcohol than they can even with the so-called moderate doses of it, which many would have us believe are absolutely necessary in every condition of life.

Another point deserving our very careful attention is the very large number of admissions into our lunatic asylums and prisons of the victims of alcohol to which a vast amount of insanity and crime is undoubtedly due and, though unable to give you accurate figures, I can affirm that it has been conclusively proved that from 2 to 3 of the lunacy of the United Kingdom is due to drinking alcohol to excess. Dr. WALMSLEY of the Darenth Asylum says that "one-fourth of all cases of insanity are due to drink." Mr. HOLMAN declared that "during the last twenty years the quantity of alcoholic beverages consumed has been doubled, and the inmates increased to such an extent that the Municipal Council has voted funds to erect as many more lunatic asylums as of containing 500 patients each." So, LOCKHART CLARKE states that during the last five years 1,300 patients had been ad-

mitted (only 1000 were admitted in the previous five years). In this number there are 1000 who are insane (4 per cent.) and 3000 who are criminals (24 per cent.). He regards crime the testimony of judges, juries, magistrates of jails, &c., is to the effect that "from 2 to 3 of the indictable offences of the United Kingdom are due to drink." In addition we have a vast amount of idiocy and feeble-mindedness amongst children clearly traceable to the intemperate habits of their parents. With reference to phthisis, M. LAMNEAU, the eminent statistician, stated that the principal causes of degeneration and destruction among the French population were tuberculosis and alcoholism. At Rouen and Havre, where the usual average consumption of alcohol is 14 litres a head, there are 402 and 303 deaths yearly from phthisis in a population of 100,000; whereas at Toulon, where the consumption is at the rate of 2 litres, the mortality from phthisis is 250.

Nor must we forget how greatly the prosperity of a nation depends upon the thrifty habits of its individuals. If there is one thing more than another that appears to scatter thrift to the winds, it is alcohol. The amount spent by moderate drinkers may be small, comparatively speaking, nevertheless that sum might be far more advantageously laid out in food or other materials which instead of doing harm to the tissues of the body would help to protect and build them up. Certainly the amount spent on alcohol by the poor, however small it may be, is undoubtedly a needless waste of money.

I am quite aware of the fact that we shall never be able to stop the sale of alcohol entirely, nor break down the prejudice in favor of moderate quantities being habitually taken, but that is no reason why we should not do all we can to stay the tide which is sweeping so many to destruction. Are we persuaded, as thoughtful men, that the disadvantages of taking alcohol habitually, are so very palpable? Then it is our privilege, nay our duty, to educate the classes and the masses as far as we can to a better and a higher standard, and when we realize what an enormous influence for good or for evil the members of our honored profession have on all with whom we come in contact, it behoves us to carefully study this important subject in order that we may be able to give a satisfactory reason for our actions, and at the same time the knowledge we may gain in the study of it, may enable us to avoid doing harm, even if we can do no good.

As there are very great disadvantages in the habitual use of alcohol, so there are very decided advantages in total abstinence. In the first place, the total abstemious avoids all the disadvantages resulting from the habitual use of alcohol. Other things being equal, he is a healthier and a richer man than the man who drinks, and is therefore less likely to end his days in the lunatic asylum or the workhouse. He is less liable to suffer from accident, less likely to give way to his passions, and he is a better law-abiding subject. The facts brought out by the returns of our Army in India as furnished to the Secretary of the Army Temperance Association by the Adjutant-General in India show that of the convicts in the Court Martial 34 were abstemious and 2,121 were phlegmatic. Taking the number of total abstemious as 20,375, and the number of

non-abstainers as 42,754; the convictions per thousand are as follows: Abstainers 4.54; non-abstainers 42.83. Thus so far as serious crime is concerned, there were during the year 1894 nearly 10 times as many convictions per mille among drinking men as among total abstainers.

3. The statistics of those summarily punished for insubordination are not so distinctly in favor of the members of the Temperance Association, though they show that the convictions among non-abstainers per thousand are almost double those among abstainers, viz., abstainers 889; non-abstainers 4,610 or 46.86 and 98.84 per thousand respectively. So much for crime. Now let us turn to the tables referring to the health of our army as influenced by total abstinence. The table has been compiled from returns furnished by the courtesy of 26 Commanding Officers of batteries of artillery and cavalry and infantry regiments for a period of six months, ending 31st March 1895, and shows that the admissions into hospital were 6.6 per cent. among abstainers and 12.0 among non-abstainers. The percentage of last year's admissions was 5.6 among abstainers and 10.0 among non-abstainers." Another point of vast importance to our army in this country and which is most materially affected by this question is that venereal diseases cause a very large number of admissions into our station hospitals. Last year there were altogether 24,184 admissions from amongst the British troops, of which 5,514 were of abstainers and 18,670 of non-abstainers, that is, the admissions amongst abstainers equalled 271.5 per thousand, whilst among non-abstainers they equalled to 375.4 per thousand. These figures leave no reasonable doubt in any mind that, so far as health in India is concerned, abstainers are much better off than non-abstainers. It is most satisfactory to note in passing that this Association is now firmly established in England, and was officially recognized by the late Secretary of State for war, through whom a grant of £500 was obtained for the one-year-old Army Temperance Association, "an unmistakable proof of the belief, at headquarters, in the value of abstinence, as conducive to the health and good conduct of British soldiers." But I am thankful to say it is not in the army only that temperance and total abstinence are advancing with rapid strides; there are a large number of medical men (more than 500,) in civil life who neither use alcohol themselves, nor prescribe it for their patients, (unless absolutely obliged to do so,) and even those, who are not total abstainers themselves, very strongly recommend total abstinence for the majority.

SIR H. THOMPSON in "Food and Feeding" writes: "I am of opinion that the habitual use of wine, beer and spirits is a physiological error, say for nineteen persons out of twenty; in other words, the great majority of the human race at any age or of either sex will enjoy better health both of body and mind, and will live longer without any alcoholic drinks than with the habitual indulgence in their use, even although such use be what is popularly understood as moderate." Dr. A. CARPENTER in the same letter to which I have previously referred writes:

"Further enquiry has satisfied me that those who wish to enjoy perfect health had better avoid the daily use of alcohol, and that there are very few forms of disease in

which its use is really beneficial. Now and then, we hear it is a powerful medicine; but its very power makes it a fearfully dangerous weapon in the hands of people generally." After such authorities my opinion I could venture to give would be out of place. Let me rather suggest that a fuller study of this subject may well repay us. Through stress of work, and when hurried, some are, at times, apt to order popular remedies, such as alcohol, more or less thoughtlessly or perhaps because they think their sanction for alcohol in some form or other is desired by the patient, and if refused will be obtained elsewhere. That alcohol is really unnecessary in a very large proportion of cases is clearly shown by the treatment of all sorts and conditions of men and women at the Temperance Hospital in London. This hospital has been in existence 21 years, during which time 10,586 in-patients have been treated, of whom 5,006 are returned as total abstainers and 5,580 as non-abstainers and unclassified. With the exception of infectious cases, all who apply for admission (provided there is room), however serious the case may be, are admitted and treated in the wards, and if infectious disease should break out in the hospital the patients are isolated and treated exactly as they would be in any other hospital. No distinction is made between abstainers and non-abstainers. During the 21 years of the hospital's existence, only 17 of the 10,586 in-patients have appeared, in the opinion of the Medical Staff, to require alcohol, and the medical officers have always had a free hand to order it if they considered it necessary. The death-rate during that time has been 6.3 per cent. During the year 1894 there were 1,044 in-patients. Of these 701 were cured, 254 relieved and 59 died, giving a mortality of 5.65 per cent.

I think it will be admitted that these are very satisfactory figures: to my mind they show very conclusively that alcohol is not required by patients in the liberal manner in which it is so often prescribed, and I am of opinion that it has often been poured down their throats quite unnecessarily, and unfortunately in very many cases it has been continued, long after it should have been discontinued, to the detriment not only of the patient's body, but also of his soul. If we realize, as all true Christians must realize that no drunkard can inherit the Kingdom of GOD, surely we must see to it that we never start any of our patients or permit them to continue, if we can possibly help it, on the downward road which leads to the drunkard's grave; rather by our example, by our words of counsel, let us stand shoulder to shoulder with the clergy and fight against this evil. What is more we must not stop at moral persuasion only, there are many cases where moral persuasion is useless, they need compulsion. I look forward to the day when not only a local veto bill will be made law, and the sale of alcoholic liquors very much restricted, but I also look forward most eagerly to the day when the habitual drunkard will be confined, and prevented from being a curse to himself and his family, and a nuisance to his neighbors. We must look to prevention, coupled with high moral training if we would rid our land of the curse of alcohol.

PERFORATION IN ENTERIC FEVER: ITS SURGICAL TREATMENT.*

By FREDERICK HOLME WIGGIN, M.D.

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Typhoid is no complication of enteric fever more dreaded by the physician than perforation which occurs in about two per cent. of all cases. Its most frequent causes are improper diet, distension of the bowel from any cause, or too early and sudden movements of the patient. It is present as often in mild cases as in those which are severe, and is most frequently met with in young adult males. As is well known, its recognition is not difficult. Its occurrence is announced by the advent in the course of the fever of sudden severe pain in the right iliac region, accompanied by symptoms of collapse, this being soon followed by the symptoms of peritonitis, and almost invariably on the second or third day the case terminates fatally. The site of the perforation is generally found to be in the last twelve inches of the ileum.

The late Prof. Loomis, in the course of the discussion on Dr. REEVE's paper on typhoid fever, said: "I do not remember to have seen a single recovery after there were unmistakable evidences of intestinal perforation. Recovery from a localized peritonitis, complicating typhoid fever, is not uncommon, but when characteristic symptoms of intestinal perforation are present, in my experience a fatal issue soon follows." With such evidence and our own individual experience of the hopelessness of the patient's condition when reliance is placed on Nature's efforts at repair, (spontaneous recovery resulting less frequently in this than in other forms of perforation, on account of the central location of the injury), it is not to be wondered at that with the constant reports of successful operations for the relief of perforation from other causes and in other locations, the physician should turn toward the surgeon, asking if, among the good tidings modern surgery is proclaiming to many sufferers, there is not some message of hope for the unfortunates whose condition we are considering, who seem at present to be condemned to an untimely death, and by whose bedside he has so often stood with folded hands, helpless to aid them. Said Dr. BONTECOUR, of Troy, New York, the first in this country to operate for this form of perforation, in the course of the discussion on Dr. J. EWING MEARS' paper, "I claim that when this mortal accident occurs, laparotomy cannot impair, but may improve the patient's chance of recovery." Said Dr. VAN HOOK, in his admirable paper reporting the first successful case of operation for perforation occurring in the course of a closely diagnosed case of enteric fever: "It is strange, nevertheless, that a question involving the only promise of help for five and seven-tenths per cent. of all those dying of typhoid fever should not have excited even mere interest and discussion." Dr. ROBERT ABBE, in a recent report of a case, also successfully operated upon (*Medical Record*, January 5th, 1895), said: "Why one class of cases should be left to die, while we operate on all appendicitis cases, when perforation can be recognized, does not appear."

Again, said Prof. KUSMAUL, of Strasburg, some time since: "Granted that the chance of a successful issue is heavily against you, that the patient is in the midst or at the end of a long sickness, that his tissues are in the worst state to stand the injuries of the surgeon's knife, that the lesions of the gut may be extensive, that the vital forces are at the lowest ebb, no one yet has hesitated to perform tracheotomy in the laryngeal complications of enteric fever which require it to save life, for those reasons."

With this testimony and much more that could be offered in favour of operation, one cannot help being surprised in looking over the literature of this subject, to find on record only twenty-four cases, of which six recovered. If those cases are rejected in which there is doubt of the diagnosis, we find only seventeen cases where an attempt has been made to relieve the patient's desperate strait by surgical means. Of these three recovered. Allusion has already been made to the first and third, and the second recovery belongs to Dr. NETSCHAJAN, of St. Petersburg, (*Medical News*, Dec. 1st, 1894). The writer's opinion, formed after a careful study of the subject and from a considerable experience in abdominal operations when the patients were septic and consequently in bad condition, is that the physician on taking charge of a case of enteric fever should prepare himself to act with promptness on the occurrence of perforation. It is well to remember that while there should be the least delay possible, these patients rarely die in the first state of collapse, and that this condition is not one favorable for operation. The patient, as soon as the diagnosis is made, should be stimulated by means of strychnia and morphia. If the patient rallies then the operation should be performed without loss of time and under favorable conditions there is a fair chance of success, especially in those cases in which the course of the fever has been mild or where the perforation has occurred during convalescence. Of course, if the patient refused to respond to the stimulation, the operation would be useless. Dr. ABBE, in the paper previously alluded to, said: "Very essential do I consider it that the surgeon should never be so hasty in getting at his work that he enters upon it handicapped by poor assistance, poor light or poor arrangements for irrigation." While the patient is being stimulated, the necessary arrangements for the operation can be made. The writer's experience has shewn him that a laparotomy, although the personal care and trouble is greater, can be even more safely performed in a farm-house with good surroundings than in a city hospital. All that is requisite is a clean light room, without carpet or furniture, except two or three wooden tables, an abundant supply of hot and cold soft spring water which has been sterilized by boiling, and a dozen towels.

Patients of this class do not bear anaesthesia well, and in fact the great danger comes from this source. With a closed inhaler of the Clover type, or Dawbarn's modification, which the writer has used with satisfaction for some years, patients can be readily anaesthetized and kept unconscious for an hour with four ounces of ether. The incision should usually be in the median line between the umbilicus and the pubes, rather than over the site of the pain, true as this guide generally is to the point of

* Read at the 103rd annual meeting of the Connecticut Medical Society and before the *Record* for publication.

operation, for some days after the abdominal wall is closed, the patient should be kept in the prone position. Search should first be made in the folds, because of the small gut and extravasated material in the folds of the cavity, as has been pointed out by Sauerbrey. If the intestine and perforated intestine is not found here, the omentum should be sought, and the last part of Sauer is then easily located and looked over. When the injured point is found, the perforation should be closed, if possible, by Lambert's or Heister's mattress sutures and should then be covered by an omentum graft. The sutures for closing the abdominal wound should now be placed, all the layers of this wall being included. These sutures should be of silk worm gut. When this has been accomplished, the abdominal cavity should be freely irrigated with a hot saline solution, (half a dram to the pint,) about two gallons being used, the temperature of the water being from 110 to 115°F. according to the degree of shock the patient is suffering from, and in most cases the abdominal cavity should be left filled with the irrigating fluid, and the sutures already passed should be drawn and tied. If effort has been made by nature to shut off the perforated point by adhesions, before they are disturbed the general cavity should be shut off by sponges or gauze. In some cases all that would be advisable to do would be to draw the perforated intestine into the wound and after free irrigation of the abdominal cavity it should be stitched to the wound or surrounded by gauze, further procedure being delayed till a future occasion. In a still more desperate case, one occurring earlier, when the fever was at its height, or in which the fever had run a severer course, one might with the aid of cocaine anesthesia rapidly open the abdominal cavity over the site of greatest pain, and after irrigating, surround the perforated intestine by gauze, thus shutting off the general cavity, favoring the formation of adhesions, and securing drainage, as has been suggested by my friend, Dr. E. D. FERGUSON, of Troy, N. Y. In one of the successful cases previously alluded to, NITCHAJAN'S, a portion of the perforated intestine was excised, and now that an anastomosis by means of the Murphy button can be easily effected in five minutes, it may in favorable cases, especially in those in which a number of ulcers are near together and in a dangerous condition, be quicker and wiser to excise the diseased intestine. The decision as to the best procedure must be determined by the circumstances of each case and by each operator for himself. It is here that skill and experience count for the most. Personally, I favor closing the abdominal wound after free irrigation, leaving the abdominal cavity full of the hot fluid, as I know from many past experiences how much this procedure does to lessen shock and to prevent the danger of septic infection of the peritoneum. If at this time shock were still great, it would be wise to follow Dr. ASKE'S advice to administer an enema of black coffee and whiskey on the operating table.

of the patient, as well as the patient's wishes and desires. The surgeon's primary concern is to save the life, and the surgical procedure should be the one which offers the best hope of recovery to the patient. The surgeon must be sure that the chance of a successful outcome of our work increases with every minute of delay and every minute saved. Finally, the physician must realize fully that the surgeon is his assistant and not his rival, and must give him as well as the patient a fighting chance. By calling him early and not after several days of treatment, which has too often been the case in this and other forms of intra-abdominal disease.

INFANTILE SCURVY IN CALCUTTA.

It is generally believed that scurvy is a disease peculiar to adult life, and that children, especially of the well-to-do classes, enjoy an immunity from it. I share in this belief, till four years ago, when a case came under my observation, which, for the first time, excited the suspicion that it might exist amongst Bengalee children, though the symptoms may not, at first sight, lead us to a clear perception of its identity. Since then I have been able to gather facts which leave no doubt in my mind that the disease is more common amongst Bengalee children in Calcutta than we are aware of. I will read notes of three cases which I consider best calculated to establish my position. The treatment adopted, having been essentially the same in all the three cases, will be mentioned briefly at the end.

*Using a report sent before the House Military Committee and sent to the House for publication.

continued, and the child continued to be fed on barley gruel, in spite of our remonstrances against it. He resisted this injudicious dietary for some time more, at the end of which the true nature of the disease revealed itself in extensive ulceration of the gums and the appearance of hæmorrhagic spots on both legs. Blood was also observed in the evacuations. Rapid emaciation followed, and symptoms of rickets manifested themselves. The lower ends of both tibiae became swollen, and the epiphyses separated from the shaft after some time. From this period till the age of nearly two years, the child's life was one of alternate deterioration and improvement, and it was only by the adoption of a most careful dietary that all traces of scurvy were finally removed from his system.

My second case was that of a male child, aged about eighteen months, who had out nearly all his temporary teeth, and had learned to walk. His father, a medical man, being absent on duty, and his mother being in confinement, he was left entirely in the hands of a nurse—an unscrupulous woman who was utterly unfit for the charge. It was afterwards found that she was in the habit of drinking most of the child's milk and of adding water to it to escape detection. When first called to see the child, I was told that he was suffering from infantile paralysis, and was being treated for it. On examination, I found the child able to stand, but the effort was evidently painful, the muscles (especially of the lower extremities) were flabby, and the skin had a rough, oldish appearance. On close examination purpuric spots were found on different parts of the body. The temperature was 100°F., and the child cried whenever an attempt was made to lift him from his bed. His breath was very foul, and there was extensive ulceration of the gums, which were hanging loosely in several places. I at once transferred the child to the care of a kind-hearted and intelligent lady of the family, under whose supervision, and with the aid of a generous diet, the child was restored to its usual health in less than two months.

My third case is still under my treatment. It is that of a female child, aged thirteen months, who has been deprived of her natural food, owing to the mother being the subject of pernicious anæmia since she was brought to bed. As in the preceding case, the child was left to the tender mercies of an ignorant nurse till the age of ten months, when she had an attack of strong fever with bronchitis. In the course of a week she was found to lie all day in bed, with hardly any power to move her limbs. It was at this stage that I first saw her suffering from most of the symptoms detailed above. The lower limbs were flaccid and painful to the touch; the shaft of the right femur and the lower ends of the tibiae and radii were swollen. The temperature varied between 102° and 100°; petechiæ were found in several parts of the body, and the characteristic ulceration of the gums was largely present. An alteration was at once ordered in the diet of the child, and she is now in a fair way to recovery under the immediate supervision of her mother.

The treatment in each of these cases was essentially the same. The child was fed only on fresh cow's milk, peptonising it whenever digestion was found to be deficient. The juice of fresh fruit, especially orange and pine-apple, was given three to four times a day.

Later on Scott's emulsion of cod liver oil with Parfitt's chemical food were given with great advantage. The condition of the gums was rectified by close attention to cleanliness and by the application of boroglyceride with glycerine. I ought to mention that the ulceration, as also the petechiæ, disappeared in each case after the child had taken orange and pine-apple juice for only a fortnight. Due attention was paid to the child's clothing, and it was daily taken into the fresh air as soon as it was found strong enough for it.

That the disease in each of these cases was scurvy a few words will suffice to prove. The ulcerated condition of the gums and the presence of hæmorrhagic spots in different parts of the body, distinctly point to changes in the blood, which can be induced by no other pathological condition known to us. The swellings of the long bones may indeed, raise in our minds a suspicion of rickets, but these appeared long after the other two characteristic symptoms had manifested themselves, and might, therefore, be dismissed as secondary results. Rickets, as we all know, is a disease usually associated with poverty and hereditary syphilis, but in none of my cases was either of these causes at work. Nor has it ever devolved with such rapidity as in the instances I have quoted. But what I believe to be the surest proof of all was the rapidity with which the scorbutic symptoms disappeared after the administration of the juice of oranges and other fresh fruits.

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PATHOLOGICAL, ETIOLOGICAL, CLINICAL AND THERAPEUTICAL REMARKS ON THE PYREXIAL STATE.

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(Continued from page 310 of Vol. IX.)

WE pass on to speak of another highly interesting form of pyrexia which, for want of a better name, or clearer knowledge, we call *urethral fever*. In some persons the passage of a catheter causes an immediate rise of temperature, sometimes accompanied by a rigor which cannot be due to inflammation. In both the last mentioned cases it seems clear that the effect is too rapid to be due to the absorption of any pyrogenic substance from the wound or urethral surface, and that there must be some stimulus transmitted through the nerves, which probably exerts a reflex action on the central nervous system. In tetanus high and sometimes excessive temperatures have been observed. WUNDERLICH records a case where the temperature was 112.5° at the time of death. Now although tetanus must be regarded as a specific infectious disease, and therefore the rise of temperature may be partly due to the morbid poison, still the affection of the spinal cord and the excessive muscular contractions must be credited with part, at least, of the resulting pyrexia.

In all the above lesions and pathological states, therefore, we have evidence of the production of pyrexia from some injury to nervous system, central or peripheral.

It should be remembered that "shock" is often an important element in these cases, as the injury producing

we can see that the pathologic condition is a physiological experiment, but especially factors are at work—out, chiefly to the temperature mechanism, causing loss of heat from the surface, and another which may be referred to the calorific centre, causing increased production of heat. Sometimes one of these factors has the predominance, sometimes the other.

Shock is meant a condition of which the most characteristic feature is a loss of tone through the whole arterial system; that is precisely the condition which, as we have seen, physiology teaches to be the cause of excessive dissipation of heat, or rapid cooling. In the cases referred to, we must therefore suppose that the loss of heat due to shock more than counterbalances any gain of heat due to injury of the heat-centre or its efferent fibres. Ill-defined degenerative changes in the brain are also sometimes accompanied by a fall of temperature, of which the explanation may be the same. But even these facts are evidence, in any case, of the calorific mechanism being interfered with by injuries to the brain, though in a converse sense to those formerly spoken of. It should be stated that after the fall of temperature caused by shock, however produced, there is very generally a reaction causing a rise, and this rise may possibly be independent of any other lesion of the nervous system.

In another series of cases, similar injuries have produced a fall of temperature. Mr. HUTCHINSON has recorded a case of fracture of the fifth cervical vertebra, where in the rectal temperature a fall to 95.8° was noted. Injuries below the first dorsal vertebra appear never to have been observed to be followed by excessive lowering of temperature. But no general law has been traced, which determines why there is sometimes a rise and sometimes a fall.

Injuries to the cord, commonly from fracture of vertebrae, produce sometimes a rise, sometimes a fall, of temperature.

Many cases of remarkable rise of temperature have been recorded since Sir B. BRODIE's famous case of injury to the cervical portion of the cord observed in 1837, when the temperature was 111°. After fracture of the cervical or sometimes of the dorsal vertebrae temperatures ranging up to 110° or more have been observed.

Another product of our defective acquaintance with the intrinsic pathology of pyrexia is the term *traumatic fever*.—It has often been observed that high fever results from wounds, apparently without inflammation, or at all events out of all proportion to the amount of inflammation. Numerous cases are recorded in surgical works, and only one typical instance need here be quoted. In a case of amputation of both legs for crushed feet recorded by Mr. LE GROS CLARK, the temperature rose from 105° seven hours before death, to 110° a quarter of an hour before death, and was 110.8° a quarter of an hour after death. These cases, then, are different from the traumatic pyrexia caused by absorption of pyrogenic substances from unsanitary wounds.

Mr. HORSLEY has suggested that the term *traumatic fever* should be restricted to the pyrexia ensuing upon a simple injury uncomplicated by septic infection. Such a simple injury would predicate a break in the chain, but the absence of exposure to pyrexia-producing conditions. He suggested that the fever of traumatic origin might be placed in fever categories, (a) simple-traumatic

fever, and (b) septic fever. Amongst cases covered under pyrexia conditions which may be said to be wounds treated upon antiseptic principles, in connection, the lecturer quoted Volkmann's view, that a fever-producing substance is developed at the seat of injury and then absorbed into the circulation. Mr. HORSLEY would separate cases of simple fractures from amputations, since in the latter there are chemical substances in immediate contact with a large absorbing area. Mr. HORSLEY suggested that the cases should be divided into two classes, viz: (1) those in which a rapid rise of temperature occurred with but little swelling, and (2) those in which much swelling was present with only a slow rise of temperature. Studying charts constructed from the first class of cases, he found that a sudden pyrexia occurred in the first hour, followed by a more gradual rise for twenty hours; then lysis supervened, which was complete in about a week. In some cases, the initial rapid rise extended over several hours, and de-cleason was quite complete in 48 hours. The first group occurred at an earlier age, in fact, where tissue metabolism was more active. In the second class a rapid initial rise to 100° was followed by a steady rise to 101°. On the third day, remissions being present. A fall to 99° then occurred, and this was almost invariably succeeded at the 112th hour by a second rise to 100°, when a steady fall brought the temperature to normal, in from two to three days. In duration these cases varied from 7.5 to 12 days. These cases occurred among the young and old, whose tissues, it would appear, were more obnoxious to injury. To this conclusion the presence of marked swelling would also point. Study of these cases led Mr. HORSLEY to suggest the following possible sources of fever. A stimulation of afferent nerves as by rubbing of fractured bone ends; absorption of extravasated blood; the existence of fat-embolism. Experiment shewed that while severe stimulation of afferent nerves causes depression, slight stimulation occasions elevation of temperature possibly by the agency of heat centres in the cord. Again, ANGERER produced artificial hematomata, and found pyrexia rapidly following. To explain the second class of cases, Mr. VICTOR HORSLEY cited experiments which, he contended, went far to prove that the development and absorption of the swelling were factors in establishing the slow rise of temperature which occurred in them.

The subject of *urethral fever* formed the fourth of the BROWN lectures of the Royal College of Surgeons, which lectures were given recently by Mr. HORSLEY. He thought it impossible that this fever could be of other than of septic origin; its rapid appearance, usually in four hours, and its supervention upon simple catheterisation without abrasion, rendered untenable the theory of a septic pathogenesis. Urethral fever he divided into two varieties, an acute, fulminating, occurring usually from catheterisation, and (2) a sub-acute fever occasioned by internal urethrotomy. The fulminating variety occurred mostly in patients who were under treatment for the first time, and whose stricture was of recent formation. The rise of temperature in the acute form was much slower, being preceded by a sub-acute drop of 1°, due probably to shock. The maximum temperature

...the first of cases occurred... the subject of stricture for... and... had treatment... which was the immediate antecedent of the fever. In cases in which no pyrexia supervened upon treatment, Mr. HENLEY found that the stricture had always been of very long standing, with a history of previous extensive treatment. To explain the pathogenesis of urethral fever, he introduced the hypothetical heat-centres in the spinal cord. The researches of QUINCK, NANNY, WOOD, HEIDENHAIN and others, rendered it probable that such centres do exist, and are in all likelihood thermo-inhibitory in nature. In a urethra crippled by a recently formed stricture, the nerves would be highly sensitive, and would readily respond to stimulation, and hence reflex heat changes would in such cases naturally be initiated, while in long-standing stricture, the sensitive character of the urethra would be considerably impaired,—a result also largely brought about by previous manipulation. The evidence was, in Mr. HENLEY'S opinion, altogether opposed to SEDILLON'S septic theory, and lent itself readily to one which appealed to a neurotic origin. Thus chloroform, ether, morphia, quinine, which could not exert any influence upon septic absorption, controlled alike the rigors and the pyrexia which, without their employment, ensued in surgical manipulation of the urethra. Drawing practical conclusions, gradual dilatation with internal urethrotomy appears to be the procedure most free from the risk of pyrexia. He advised that chloroform should be administered, the urethra dilated to No. 4 E., and internal urethrotomy then performed. No instrument should be left in the urethra; nor should one be passed for 96 hours after the operation, and recourse should be had to quinine for the after-treatment. The urine in these cases was somewhat lessened, but rapidly returned to its normal standard.

A MIRROR OF PRACTICE.

THYROID EXTRACT IN PSORIASIS PALMARIS.

By CHARLES FORBES, M.D.

Late Surgeon, N. G. M., West Africa.

August 30th, 1894.—C. A., a strong healthy, looking lady, *æt.* 36; about 5 feet 3 inches in height, weight 15 st. 6 lbs. consulted me regarding an eruption in the palm of her left hand which, she said, had existed for about 14 days; she complained of constipation; the cutaneous eruption was dry, harsh, and scaly (strongly typical of psoriasis); she also remarked that she had never had any other form of skin disease.

Previous History.—During childhood had been attacked with acute rheumatism, and her early life had been sickly but on growing up appeared to be quite healthy, had worked hard, etc. Had first noticed a hard dry scaly appearance in left palm in November 1893, but it had died away shortly afterwards on applying various ointments. She also noticed since November in that year her hair had been falling out. She had also on thyroid extract *gr.* three twice a day; but she complained of nausea and slight indigestion, eruptions more marked, and declared the

kind medicine was most disagreeable. I put her on thyroid gland powder (equal to 1/4 of a fresh gland three times a day).

September 7th.—I found her much better (she had taken 9 doses), slight thyroiditis had set in. Temperature was 100°F. and Pulse 92, more lively and active in her movements, no change in eruption except that it seemed redder; thirst; amount of urine passed during the day increased.

September 10th.—P. 84, T. 99°F., still very thirsty, perspiring freely, bowels opened every day since the 7th, says she is passing about twice as much urine as usual, feels very bright and well. Scales in left palm beginning to desquamate. Hair does not come out so freely as before, and her face looks slightly thinner; weight 15 stone 5 lbs.

September 17th.—P. 80, T. 98. Has not complained of nausea; tongue not coated; no headache; still bright and active; bowels regular every day; appetite good; face thinner; urine still abnormal in daily quantity; hair does not come out at all; still perspiring freely; weight 15 stone 3 lbs. 6 ozs.

September 24th.—P. 76; T. 98.6°F., not perspiring as freely; bowels regular; tongue clean; general health good; eats well; sleeps well; face markedly thin; panniculus adiposus diminished; downy hair growing on both forearms which had been previously quite devoid of hair; weight 15 stone 11 lb.; no sign or trace of eruption in left palm; skin normal. Thyroid treatment was now abandoned.

February 3rd 1895.—Again saw this patient; face a little fuller; feels quite well and speaks highly of the medicine. Weight 15 stone 2 lbs. No recurrence of psoriasis eruption.

Remarks.—I was led to adopt the thyroid treatment in this instance by the success attained with this drug by Dr. B. CRANWELL in a case published in the *British Medical Journal* of 29th March 1894.

Psoriasis of the palm in one hand only is known to be a most obstinate and intractable form of this disease which is, as a rule, but little affected by local or general treatment (unless specific) which, I am of opinion, should be excluded in the present case. It might, I think, be rightly ascribed to excess of uric acid in the blood as this patient's history denotes; for she was often subject to slight urticaria, probably toxicemic in origin.

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A SUCCESSFUL OPERATION FOR IMPERFORATE ANUS.

By F. THUMBOSWAMY PILLAI, C.M.S.

Deolgaon, Raja, Berar.

On the 24th May 1895, at 8 p.m., I was called upon to see a new-born male child who had not defecated for about 12 hours since birth. The child was lying semi-conscious and frequently vomiting a watery fluid, and occasionally crying for a few seconds. The abdomen was tympanitic and urine was passed during the efforts at vomiting.

On looking for an anus, I observed a dark circular and wrinkled spot situated in the place for the anal orifice but having no communication with the bowel. The oval surface was flat, not bulging at all, even when the child attempted to vomit or cry.

A longitudinal incision, about half an inch long, over the dark circular wrinkled spot, was carried high up to about 2 inches, obliquely upwards and backwards using the left little finger as a guide to avoid injuring the large blood vessels in this region. Then a search was made with the finger for the lower end of the rectum, which was felt like the movement of a round worm, i.e., moving free. This was seized with a pair of dressing forceps, brought down as far as the external opening of the wound, by means of gentle traction upon the bowel and its edge being first stitched to the margin of the wound with four silk sutures a free opening was then made into it, with the point of the scalpel, sufficiently large to readily allow a free discharge of its contents. About 2 ounces of meconium were passed and the little patient was at once relieved from the urgent symptoms of vomiting and tympanitis.

The subsequent progress of the case was very satisfactory. On the third day after operation the sutures were removed as the union was perfect, and the rectum, as well, showed no tendency to be drawn up. Bowels were kept open and regular by occasional doses of castor oil. Carbolic oil (1 in 20) was frequently painted over the external wounds for a fortnight; at the end of which period the wound healed up, leaving a permanent passage with no tendency for the opening into the rectum to close up again.

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THREE CASES OF STRAMONIUM POISONING RECOVERY.

By MOHAMMUD KABIRUL HASUN, C.M.S.,
Pisangan Dispensary, Rajputana.

On the 19th May 1895, at 1 P.M., three patients from one family were brought to my hospital by the police who stated that at 11 A.M. they had eaten bread of jand herb and of baigun and laid down to sleep for a short while, and when they got up their heads swung and their ideas were confused. On examination, I found them suffering from various degrees of stramonium poisoning:—

(1). RAM NATH *at* 30, a previously healthy and laborious man. His ideas were confused or mixed, conjunctive blood-shot, pupils dilated, face red, power of speech lost, pulse feeble, involuntary motion of the body, cannot walk properly, and all the other symptoms of *dhatura* poisoning, but not very severe.

(2). MATI, *at* 27, the wife of RAM NATH, was a weak woman whose condition and symptoms were the same as of the above patient but very severe, and she kept on picking at imaginary straws from the ground.

(3). RAM PERHAD, *at* 3, son of RAM NATH was a strong healthy child, exhibiting conditions and symptoms similar to those of his father but less severe.

Treatment; I gave an emetic of zinc sulphate, and after a few minutes had cold water continually dashed on their heads and faces, in open air, till 3 P.M., when RAM NATH and his son were quite well, their pupils normal, speech clear, pulse regular, no involuntary motion in body and all the bad symptoms had disappeared; but as MATI was not quite well, the same treatment was continued till 4 P.M., when she recovered consciousness and as there were no further symptoms of poison I let them go home, at 5 P.M. and advised them to use thapsus (i.e., saunf, kandi, rose &c.)

COMPLETE CONGENITAL OBSTRUCTION OF ANUS. OPERATION: RECOVERY.

By AMT. SUDEN. KHALIFA RASHID-UD-DIN, M.B.,
Civil Medical Officer, Chitrawa, N. W. P.

A FEMALE infant, a day old, was brought to me, in the Sandila District, Hardoi, Oudh, in September 1893, with the complaint that since her birth she had not passed anything by the bowel.

On examination the site of the anus was found completely closed by a thick membranous septum. There was a faint mark of the raphe along the central line, and a slight depression through which, after a little difficulty, the dark meconium could be seen, and on which an impulse could be felt.

Operation.—One incision was carried through the septum along the middle line, and two across on either side; after which the meconium escaped freely. The four angular flaps were then removed, and complete recovery obtained by the use of oiled plugs. There was no other malformation.

Remarks.—This form of malformation, although not very rare, is interesting, on account of its non-accompaniment, in this case, with any malformation of the external genitals or other organs.

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POISONOUS SYMPTOMS FOLLOWING WASP- STING: RECOVERY.

By JOSEPH BENJAMIN, C.M.S.,
Medical Practitioner, Ahmedabad.

On the 16th March 1895, a few Parsi families went to see the Clock Tower at this place and were swarmed upon by large numbers of wasps that stung them on the head, face, ears, neck and hands. One of the ladies, two gentlemen and a boy were severely wounded, while all of them were in intense agony and restless. The lady was unable to speak for some time, and one of the gentlemen kept tossing his head about wildly. The heads, hands and faces of all these patients were greatly swollen. Shortly afterwards all of them were seized with vomiting and diarrhoea which ceased the next day. They were treated with laudanum and salvolatile internally and lead lotion externally.

Remarks.—These cases are reported because in all the patients vomiting and diarrhoea supervened after the sting a phenomenon not generally accompanying wasp-sting.

TREATMENT OF DIPHTHERIA.

ABUNDANCE of sunshine, the greatest of all purifying agents and germicides, good hygienic surroundings—absolute cleanliness indoors and out, internal and external—are axioms, so to speak, which should form the basis of treatment in all cases. When the disease has appeared in any locality the whole population should be informed at the earliest possible moment, so that suitable precautionary steps may be taken to suppress the outbreak. The mouths and throats of all children under fifteen years of age in the infected district should be carefully examined from day to day. DOCTOR DU CROUX, in *Journal of Medicine*.

THE Indian Medical Record.

16th November, 1895.

THE MEDICAL PRACTICE QUESTION IN INDIA. SOME FACTS ABOUT OFFICIALS AND PRIVATE PRACTICE.

THE *Indian Medical Gazette* ventures in a very feeble and impotent manner, to pose as the apologist and advocate of medical officialism in India. It has proved itself utterly incompetent for so grave a cause, which certainly needs both an apologist and an advocate. Whatever our contemporary may have to say upon sanitation we are prepared to receive as coming from an organ thoroughly conversant with its text, but its utterances on the "Medical Practice Question in India" display the most lamentable ignorance of the subject. This want of knowledge is but natural, for one must be in the actual every-day practice of his profession to know anything of the details that concern the matter of income from such a source.

The *Indian Medical Gazette* writes as follows:—"With reference to the attention that is being drawn in the Press to the large amount of private practice obtained by officers of the Indian Medical Service in Lower Bengal, we think it will be useful to throw a little light on the actual position of affairs, wherein it will be seen that the prospects instead of being so brilliant and prosperous as described, are very poor indeed. Some years ago, the chief inducement for officers of the Indian Medical Service to enter the Civil Service of the Government of Lower Bengal, was the hope of securing, after some time, an appointment in Calcutta. With the exception of Dacca, Bankipur and Darjeeling, there was nothing else to look forward to, and officers made up their minds with this object in view, to pass a lonely life for years in an isolated and small unhealthy and malarious station, surrounded by paddy-fields, with little or no European society. Private practice did at one time perhaps help to compensate in some degree for this isolation, but whatever may have been the case in former times, we are in a position to state as a fact, that today the so-called private practice in the majority of cases is practically nil. o o o

With loss of private practice, the fall in the value of the rupee and increased cost of living, the civil branch of the Indian Medical Service is far from being the highly favored service it is represented to be, while the block in promotion to the administrative ranks, which it is at present suffering from, if it continues, will likely, when it becomes known, render the service still less attractive. Instead of it being the rule, as was the case some 20 or 30 years ago, that promotion to the administrative ranks took place either before or at about the 25th year of service, the average period is now from 30 years or more. True, a few men have attained administrative ranks recently at an earlier period, simply from the fact that there was a period of five years between 1860 and 1865 during which no officer entered the service, but we are now referring to the general rule."

Now with regard to this somewhat lengthy quotation from the *Gazette*, we would remark as follows:—

It is full of misrepresentations, inasmuch as in the first place, the question of private practice, concerning which there has recently been so much agitation in the medical and lay press, refers to large cities in India, and not to small stations in Lower Bengal, so that the dismal picture or simile, drawn by our "knowing" contemporary, in which it likens the lonely official to the "solitary bogie in the paddy fields" is too far-fetched to inspire sympathy. Everyone knows the delightful social life of mofussil stations, and how really enjoyable is the early portion of the junior civil surgeon's sojourn among these delightful experiences. Time would wear very heavily on his hands were it not for the tennis parties, shooting excursions and other jollifications that form the sum total of civil official life in almost every mofussil station throughout India. Every civil surgeon will allow, that to describe his daily life as a monotonous, routine of hard, dry-as-dust medico-legal experiences, mixed up with toil and labor, causing his life to be a burden, is simply nonsense.

Of course he signs a lot of papers and forms, inspects a jail, spends an hour at the miniature hospital or dispensary; once in a year or two he rides through his district, —a pleasant and necessary plunge for his liver—but who among our Civil Surgeons will fail to admit, that the bulk of the work done in his district for which he magnanimously accepts all the credit, is really done by the Assistant Surgeons and Hospital Assistants under his orders. These are facts and are very different from the picture of the lonely, disconsolate, malaria-threatened Indian Medical Service Officer "in the paddy fields."

The *Gazette* says:—"Private practice did perhaps at one time compensate in some degree for this isolation (in the paddy-fields of course) but whatever may have been the case in former times, we are in a position to state as a fact, that to-day the so-called private practice in the majority of cases is practically nil." We have italicised what we feel as a fact to be anything but a fact—in fact this so-called fact is a hideous deviation from the truth. We would challenge the *Gazette* to prove its so-called "fact." There is not a single official practising in Calcutta who makes a farthing less than two thousand rupees in addition to his monthly pay, while there are three or four among them, whose income from private practice equals the monthly salary of the Lieutenant-Governor of Bengal! If in the estimation of the *Gazette* a monthly income of from two to six thousand rupees, is a practical "zero" or "nil," then of course mathematical calculations have lost all their logical significance. We know as a "fact" that one of our junior official practitioners has no less than seventy-two families on his regular list of family-patients, that some of these families are accepted on annual fees of Rs. 150 and Rs. 200, and that one or two of our worthy official practitioners have openly made it their boast that their monthly income from private practice varies from four to six thousand rupees! Had our contemporary read in the lay press the jubilant and beautiful description concerning official practitioners and their "primes" emanating from the pen of an official, it would have greatly modified its dogmatic assertion, namely:—"We are in a position to state as a fact." The fact

and the higher posts, which are the right of Government officers, to be given to the able and other persons. It gives a diametrically opposite conclusion to the result. Our contemporary grows impatient with the Government to make administrative appointments and to make the efforts that make the ascent to a higher sphere from a "professor" and official (private) practitioners to Inspector-General or P. M. O., a slow and lengthy one. This, too, is a pitifully impotent plan, for as a matter of fact, when promotion comes and is offered to these "professor" practitioners, they as a rule either allow promotion to slide, or they shirk its responsibilities by retiring from the service.

But having regard to our contemporary's assertion that private practice for officials in Calcutta is to-day "practically nil," we would beg to suggest that in view of its own declared policy, the Government shall not permit its servants to engage in private enterprise and thus to vitiate their own legitimate duties and at the same time handicap the aspirations of private individuals whom the Government is bound to protect. We say that in view of this declared policy, the Government has a perfect right to call upon its medical servants who are engaged in private practice in the metropolitan cities of India, to send in a true and complete statement of their monthly income from private practice and the nature and sources from which this income is derived, namely:—families, schools, trading houses, insurance offices and such like. We feel sure that such a demonstration of the real facts of the case would instantly compel the Government in simple honesty to the public interests, to prohibit medical officials from engaging in private practice, for then it would be revealed that official duties for which large salaries are paid from the public exchequer, were being sacrificed wholesale in the greed for making money.

If what the *Gazette* affirms turned out to be true, the scandal, small as it might then be proved to be, could be swept away without the faintest ground for complaint that to deprive professor-practitioners of what was or is "practically nil" is no hardship at all.

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THE MADRAS PROTEST AGAINST DR. HART'S CRITICISMS OF THE I. M. S.

SINCE penning our article on the agitation that has been proceeding among the members of the Indian Medical Service as a result of Dr. ERNEST HART's address before the Public Health Section of the British Medical Association at its annual meeting for 1895, we have had the pleasure, or rather we should say the satisfaction, of perusing the proceedings of the special meeting of the South Indian Branch of the British Medical Association—a meeting at which a strongly worded protest was adopted with acclamation, to be forwarded to the representative of the branch in England, in order that steps may be taken to prevent the Editor of the *British Medical Journal* from defaming the Indian Medical Service, many members of which are also members of the British Medical Association.

There is a feeling that Dr. HART has painted matters very much blacker than they are, and in so doing has placed the Indian Medical Service in a very un-

favorable position before the public. It is true that, as our previous article has shown, we are very far from Dr. HART's intention to disparage the members of the Indian Medical Service; but that it is his earnest desire to alter, if possible, the system of medical and sanitary organization obtaining in India. That the alteration is a pressing necessity is our positive conviction, and it is what we have repeatedly set forth in this journal ever before Dr. HART's war against this system, which involves an unnecessarily high military expenditure, while the sanitation of this precious dependency of the Crown receives inefficient consideration. We have to express a regret however that Dr. HART, in conducting his war in a great and noble cause should have made use of weapons to wound the feelings of our brethren of an excellent service. While then we absolve Dr. HART of any wilful intent to offend or reflect upon the I. M. Service, his utterances are highly uncomplimentary and damaging to the members of that Service, which has had two alternatives left to it, viz:—"to admit the impeachment by silence, or to emphatically declare against it." It has, we are glad to find, chosen the latter and the wiser alternative and we applaud its spirited defence of its honor, capacity, and intelligence.

However, although the members of the South Indian Branch of the British Medical Association have done all they can, and perhaps all that can be done to marshal all available facts which redound to the credit of the I. M. S. they have in no way disproved the necessity for a much improved sanitary organization in this country. Those present at the special Branch meeting were studiously careful—and this was but natural and to be expected—to make the best possible case but for themselves; and yet in regard to sanitary work in India the sum and substance of all their addresses appears to be:—"well the Indian Medical Service has done all that could be done under prevailing conditions and circumstances; there is no doubt vast room for improvement; but there are many handicapping influences against more marked progression." Indeed Surgeon Lieutenant Colonel W. G. King, who is the Sanitary Commissioner of Madras and, if we mistake not, admittedly the best sanitary authority of that Presidency, said in his address, which was the most important and statistical of all addresses made at the special meeting, "that our sanitary methods, and more especially our sanitary organization demand urgent reform in this country. No one will be more disposed to admit than myself. In this I am at one with Dr. HART." It is for the purpose of bringing about this urgent reform that Dr. HART is strenuously labouring; and for the purpose of getting the Government of the country to recognize that (to use the words of Dr. King) "When compared with its efforts towards organization in other directions, it has failed to give sanitation that full place in its administration, which the public of the present day rightfully demands. If recognizing more fully the importance of sanitation, it would devote a better proportion of existing funds to sanitary organization." Then, we would venture to say, we exactly Dr. HART's view. We vision what the Indian Service is looking most after, and what it needs most for sanitary reform; and what is, of course, the object of the

His wife said he was looking pale, and I was giving him 100 grains, and he was turned very pale.

Upon examining him on the next morning I became convinced that the vital forces had misdirected the remedies and that a miseria of retro-absorptions had resulted. I then wrote out the following prescription:—

Transaceticamphtholamine,
Sodium chloroparacetamidophosphonate,
Orthoamidophenylbenzoic anhydride,
Amidocetoparaphenethiline ... aa ʒj.

M. Sig.: A teaspoonful every hour.

When the wife presented the prescription to the druggist he instantly dropped dead! The patient is up and about, but something is wrong with his Broca's convolution—he mutters in a multi-syllable lingo that is intelligible only to modern pharmaceutical chemists. I am in hiding where the spiral melody of the woodbine blends with that twine with ever sweet, low, soothing, murmurous quadrisyllabic rhythmic runs of the gentle polygonum punctatum.

TEMPERANCE IN RELATION TO THE MORAL AND PHYSICAL HEALTH OF BRITISH SOLDIERS IN INDIA.

The *British Medical Journal* says:—The remarkable influence of the Army Temperance Society India in improving the physical and moral health of the soldiers is brought out very forcibly in the statistics for 1894-95, collected by the Secretary from Adjutants-General and officers commanding corps in India.

Trials by Court-Martial.—Convictions of abstainers, 94; of non-abstainers, 2,181. The number of abstainers having been 20,875, and of non-abstainers, 49,758, the convictions were therefore per 1,000 among the abstainers, 4.54, among non-abstainers 42.92, or nearly ten times as many convictions per 1,000 of the drinkers as of the non-drinkers.

Number Summarily Punished for Insubordination.—Among abstainers, 69, or 48.8 per 1,000, as against 4,610, or of non-abstainers.

Convictions for Minor Offences.—In the three months ending March 31st, 1895, the entries in twenty-six corps among abstainers 23.2 per 1,000; among non-abstainers 99.7 per 1,000. General DANDRIDGE, in recommending separate temperance canteen tents on the line of march, stated that one regiment he inspected in 1885 at Umballa had 175 courts martial, with £100 fines for drunkenness, in one year; next year 37, with a proportionate decrease in the fines. This good effect, added the General, was the result of upwards of 400 of the men having joined the temperance societies.

Health.—In these twenty-six corps during the six months ending March 31st, 1895, the admissions into hospital per cent. were: of abstainers, 6.6; of non-abstainers, 12. We need hardly point to the obvious moral of the great fineness and efficiency values of temperate soldiers.

THE CLIMATE OF CALCUTTA.

WHILE with the need and urgent demand for sanitary science, attention has been closely paid to many of the minor details and immense effort made to control, if possible, the conditions under which diseases spring up, do their deadly work and disappear, the meteorologist has unfortunately been ignored in many instances, and the salient points forgotten that climate exerts a *ponderose* influence on all things living, whether animal or vegetable, and that it is to climatology we must look for the solution of the mysteries that affecting humidity, rainfall, sunshine, winds and temperature, materially influence the animal, vegetable and mineral kingdoms, each of which, though apparently separate, is essential to the other; but nothing can be done save accurate knowledge gleaned except we have correct statistics of both the normal

and the abnormal, to guide us. Taking now account of the fact of the small height above sea level of the generally damp neighborhood, we ought to expect the climate, even though it be some little distance inland, a climate similar to that of a city situated right on the sea coast, and its diurnal range of temperature ought to be much greater than it is. But for some reasons, not clearly understood, Calcutta is precisely the reverse of these requirements that render the Australasian summer so bearable and its hygiene so superior. Calcutta unfortunately does not possess the advantage of the regular diurnal sea and land breeze that its position would entitle it to. We may, however, very shortly learn a great deal of the reasons that influence these changes, and be in a definite position to draw conclusions, as with the assistance of Mr. DOUGLAS APOSTOLIS, the well-known specialist in Indian meteorology, Mr. ELIOT will, on his return from Persia, publish his M.S., dealing with this important subject:

BOMBAY MEDICAL AWARDS.

To stimulate energy and promote zeal among its students, the Grant Medical College is this year offering *substantial* scholarships and prizes as follows:—To undergraduates about to enter the course, 1 Jamkhandi and 2 Cowasji Jehangier scholarships of Rs. 10 per mensem each, tenable for 10 months. To first-year students, five Government scholarships of Rs. 10 each monthly. To second-year students, 1 Reid, 2 Anderson, 1 Farish and 2 Carnac scholarships of Rs. 15, 15, 14 and 13 per mensem respectively. To third-year students, 2 Farish one of Rs. 20 and one of Rs. 15 and 1 Carnac, 1 Reid and 1 Anderson of Rs. 15 per mensem each, together with a MacDonal Prize of Rs. 60 for medicine and a Wellington Gray Medal for anatomy. To fourth-year students, a Carnac, Anderson and Farish scholarship of Rs. 25 per mensem each and a Reid and a Farish scholarship of Rs. 15 monthly, as also a Cursetji and Cowasji Prize of Rs. 60 each; while for those who take their degree of L. M. S. there are 8 prizes and scholarships ranging from Rs. 40 to Rs. 300 each. For the Military Medical Students a special series has also been arranged of awards in the shape of prizes and medals.

NOT SOLDIERS BUT CIVIL ATTENDANTS.

LORD WOLSELEY, the new Field Marshal and Commander-in-Chief of the British Army, while at one of the parades in Dublin, observing that the men of the Medical Staff Corps attending the parade saluted him on his arrival on the ground by "carrying swords," he immediately directed Major-General Montmorency (Viscount Frankfort de Montmorency) to bid the medical officer commanding, to issue the order "return swords," and when giving General Montmorency these instructions, Lord WOLSELEY added that "these men have no right to draw their swords; they are not soldiers, but civil attendants on the sick." This is rather unfortunate for that section of our military brethren who desire to see their professional designation of Dr. or Surgeon completely eclipsed by an out-and-out military designation. Clearly GARNET WOLSELEY does not favor this metamorphosis, and if his will in the matter is to have paramount sway, we fear that a reversion to the old and honored title of "Doctor" will be the reward of our military medical hierarchy.

THE FOUR QUALITIES OF DRUNKENNESS.

WHEN Adam first planted the vine, Satan came and killed a peacock over it, and the vine drank its blood. When the vine grew and put forth its leaves, Satan came again and killed an ape over it, and the vine drank the blood of the ape also. When grapes first formed on the vine he killed a lion over it, and the vine drank up the blood of the lion. When the fruit was fully ripe, Satan came once more and killed a pig over it, and the vine drank this blood also.

... who drinks of the fruit of the vine imbibes
... his qualities. When he first tastes the wine, it
begins to crawl in his limbs, the colour blooms in his face,
and he becomes as gay as a peacock. When the first signs of
drunkenness come upon him, he plays, claps his hands, and
laughs like an ape. When the wine grows stronger within
him, he grows violent like the lion, and challenges every one
else. At last he wallows like a pig in the mire, desiring
only to sleep, and his strength is gone.—*Independent*.

TRUE PHILOSOPHY.

The following is a translation of a passage from Goethe's
Maxims which runs as follows:—

Wouldst shape a noble life? Then cast
No backward glances towards the past;
And though somewhat be lost and gone,
Yet do thou act as one newborn.
What each day needs, that shalt thou ask;
Each day will set its proper task.
Give other's work just share of praise;
Not of thine own the merits raise.
Beware no fellow man thou hate,
And so in God's hands leave thy fate.

HUXLEY says in a footnote to the passage: "I should be
glad to take credit for the close and vigorous English version
but it is my wife's and not mine."

LADY ELLIOTT'S HOSTEL FOR FEMALE MEDICAL STUDENTS.

AMONG the new works of importance under construction in
Calcutta is this new hostel for female students under training
at the Campbell Hospital. The new building, which
is two-storied and is to stand in a walled-in enclosure
to the south of the hospital, is rapidly approaching completion
and is expected to be ready for opening before SIR CHARLES
and LADY ELLIOTT bid farewell to Calcutta. The institution
will supply a much-needed want, and the accommodation
has been devised so as to provide convenient and cheerful
surroundings for the young women who have a severe course
of training to undergo in order to qualify. The work is in
charge of the Executive Engineer, 2nd Calcutta Division, MR.
KRISHNA CHANDRA BANDYAPADHYAY, to whose abilities
and success we have had occasion to refer more than once
recently.—*Indian Engineering*.

HOW THE DANGERS OF CYCLING MAY BE AVOIDED.

DR. GEORGE HERSCHEL says the dangers of cycling may in
great measure be avoided—(1) The use of a low gear; (2) the
upright position in riding; the stooping position prevents proper
expansion of the lungs and interferes with the proper
aeration of the blood; (3) adequate food when riding, and
the avoidance of muscle poisons, such as beef tea—the diges-
tive power of the stomach is inhibited while riding (4) the
avoidance of kola and coca preparations; these, by benumbing
the sense of fatigue, cause more work to be done than is
judicious; (5) on no account should the cyclist continue
riding after he has commenced to feel short of breath, or
when there is the slightest sensation of uneasiness in the
chest.

A SEGREGATION HOSPITAL FOR DARJEELING.

LETTERS have recently appeared in the *Englishman* ex-
pressing the great need there is for a hospital for contagi-
ous diseases in Darjeeling. This station has grown rapidly
during the past few years, and in the summer months has a
European population of about 4,000 souls. The Eden Sani-
tarian cannot accommodate persons suffering from infectious
diseases and such cases, if left in boarding houses or private
families, are sure to spread and may probably assume an epi-
demic form. The absence of such accommodation for the public
is a serious drawback to this popular health resort, and we

trust the Municipal Commissioners will take early steps to
move the Government to supply this need.

THE INDIAN SANITARY DEPARTMENT.

WHILE rejecting the proposals of Dr. W. J. Stimson
at the late Indian Medical Congress (and published on page
222—7 of the Transactions of the Congress) to place the sani-
tary needs of India under the direct executive control of the
Sanitary Commissioner, the Governor-General in Council ad-
mits the force of this Health Officer's remarks, and directs that
if local Governments, Corporations or Administrations, whe-
ther Civil or Military, at any time, require the advice or assis-
tance of the Sanitary Commissioner it should be freely and
promptly given.

His Excellency regrets the absence of proper machinery for
the efficient sanitation of India, and thinks that the sanitary
work done is not at all commensurate with the heavy ex-
penditure incurred; but at the same time feels constrained
to acknowledge that some portion of the executive outturn
has been more than extremely well done, and greatly favors
the idea of encouraging sanitary acquisitions by institut-
ing special diplomas in public health and thus stimulating
the desire for attaining a high standard in hygienic and
bacteriological work, more especially among the Assistant
Surgeons and Hospital Assistants, on whose shoulders devolves
the major portion of the medical needs of this country.
But here, again, considerable thought and care are required,
because the special training of these classes in a thorough
course of hygiene and preventive medicine, together with
the laboratories, medicines and instruments required for
such training, necessarily entails a large expenditure, and
it is not without reason to suspect that after undergoing
such special training, the members of the medical departments
would naturally expect, and possess the right to demand,
a higher rate of salary than they at present obtain. The
Governor-General in Council deploras (H. D. Res. 10-353-44
of 29-9-87) the round-peg-in-square-hole system that allowed
sanitary officers to holiday in hill stations the time they
ought to have spent on inspection duty in the plains, and
relegated to (perhaps) incapable seniors important duties
that ought to have been entrusted to more active and meritori-
ous juniors, and, anxious to mend matters that really are
a scandal to the country, His Excellency calls for opinions
and proposals from the local Governments as to the best
lines on which to create and re-organise the various depart-
ments necessary to efficient hygiene in this land of many
nations and very diverse creeds and customs. So far, we are
at once with His Excellency; but his proposal (clause 9 of
Home Department Proceedings, dated 28-10-95) to amalga-
mate the offices of the Sanitary and Medical Departments
and place them all under the direct control of, and subordinate
to, the head of the Medical Department is not likely, for
many and grave reasons, to meet with general approval, as
it re-establishes, with a vengeance, the very Military hier-
archy that Dr. HART inveighed against, and whose yoke
the civil medical faculty is chafing under: for India
does not possess a purely Civil Medical Service.

ASSISTANT SURGEON JOHN ROWLEY, I. M. B.

WE deeply regret to announce the death of Assistant
Surgeon John Rowley, on 24th October, at Darjeeling, from
blood-poisoning contracted while attending a post-mortem ex-
amination in the Military Hospital at Jalapa, Mr. Rowley
was a smart and talented officer and very popular wherever he
served. He was Civil Surgeon of Kanhangad at the time of
his decease, and had gone on leave to recruit his health at
Darjeeling. He leaves a widow and three children to mourn
his loss, which will also be greatly felt by all who knew him.

NEW MEMBERS OF THE INDIAN MEDICAL ASSOCIATION.

The following names have been added to the list of Members of the Indian Medical Association since the last publication:-

General Havelock Ellis, Assistant Surgeon, I. M. S., Lucknow.
Major General Shalby, C.M.S., Civil Dispensary Baroda.
Dr. Viswanath Phani, C. M. S., General Hospital, Madras.
Arthur B. Leicester, L.M.S., Government Dispensary, Calcutta.

Dr. Ishwar Mahta, C.M.S., Civil Dispensary Chattrapur, Ganjam.

INDIAN MEDICAL PROVIDENT FUND.

The following names are added to those already published as willing to join the Indian Medical Provident Fund.

T. Agarwal Mahta, C.M.S., Chattrapur, Ganjam; Raja Rao Das, C.M.S., Sonapat, Ganjam;

SHORT ITEMS.

"*Tabloids*" of *Salicyls of Magnesium* are recommended by Dr. Brownlow Martin as a local bactericide in the treatment of follicular tonsillitis, aphthae, and soreness. When the salt comes into contact with the mucous surfaces it is decomposed into sulphurous acid, and magnesium. The gentleman mentioned has employed the "tabloids" with special advantage. They are quite palatable, and are not objected to by children.

In Sir Charles Elliott's recent resolution on "Higher Education in Bengal," he pays a well-deserved compliment to our respected confere Dr. Mahendra Lal Sarkar, M.D., C.I.E., for his presidential guidance and care of the "Indian Association for the Cultivation of Science," and remarks that this corporation is doing excellent work and is deserving of cordial encouragement from the Government and the public.

Dr. Lawrie, has in conjunction with his assistant Dr. Jordan, just completed a series of experiments resulting in a complete demonstration of the fact that Laveran's malaria present is nothing but an altered white blood cell, whose vitality is impaired or crippled by malarious fever. Quinine restores the vitality and renders the cell vigorous again.

This General Order, dated 24th March, 1898, has just come to light:—"The bill drawn by Lieutenant Macleod, Barrack Master of Fort William, amounting to forty Bhoos Ruppes, for two wooden legs prepared by Messrs Bruce and Smith for two invalids of His Majesty's 67th Regiment of Foot, is passed by the Governor-General in Council."

This is Professor Huxley's epitaph, written by himself:—
And if there be no meeting past the grave,
If all is darkness, silence, yet 'tis rest.
Be not afraid, ye waiting hearts that weep,
For God still "giveth His beloved sleep."
And if an endless sleep He wills—so best.

The Paris correspondent of the *Times* announces that Dr. Ducloux has been unanimously chosen to succeed the late M. Pasteur as Director of the Pasteur Institute, while Dr. Roux is the sub-Director. These are the appointments that were generally anticipated.

Says the *Londoner Magazine*:—"The question whether physicians should in some cases expedite death, is being seriously asked in professional circles in America, and the response would seem to be that, under certain well-defined conditions, this act is not merely allowable, but quite the duty of medical men."

It is said that the scheme on foot for a new Chemical Laboratory, Department at the Medical College, Calcutta,

is likely to be completed very soon. The new building, which is to be erected on the site of the old one, will be a fine specimen of modern architecture.

We regret to announce the death of Dr. Arthur H. Mansfield, Assistant Surgeon of Calcutta, on 17th March, at the age of 49 years. Sir Rivers Thomson said of him that he was "the best man available in the Medical Medical Service and equal to a Civil Surgeon."

Assistant-Surgeon W. O. Moffitt, I. M. S., of Umballa, has turned out a most proficient Oriental Surgeon. During his brief service of three years he has passed five State Examinations in Indian languages, the last being the Higher proficiency examination in Urdu.

Assistant Surgeon P. A. Whickler, I. M. S., holds the diplomas of L.R.C.P. and S. Edinburgh. His qualifications deserve the special attention of the Office of the Surgeon-General with the Government of India for employment in the Civil Department.

Dr. Gilbert Park, M.D., L.R.C.P., has settled in practice in Calcutta as Dr. S. W. Chatterjee's assistant. He comes to us with a good reputation as an ophthalmic surgeon. We heartily welcome Dr. Park and wish him much success.

Emeritus-Professor John Struthers, lately M.D., Professor of Anatomy at Aberdeen, but originally of Edinburgh, has been elected President of the Royal College of Surgeons of Edinburgh.

Sir Henry Thompson was recently left a legacy of £10,000 by a patient. The friends of the deceased are, it is said, taking steps to have the will of the testator declared null and void.

The *Omaha World-Herald* says that the City Physician and Coroner of Pender, Nebraska, is a woman, who was elected unanimously last autumn after she had been but six months practicing in the town.

Mrs. M. F. Neale, a daughter of the late Dr. E. Ruffery, of the Chandney Hospital, has been appointed to the female branch of that hospital. Mrs. Neale received her training on the Dufferin Fund at the Calcutta Medical College.

Assistant Surgeon Frank Bradley I. M. S. Civil Surgeon, Tiddim, Burma, has passed the State examination in the Chin language, and has received an honorarium of one thousand rupees for the same.

Sir William Mackenzie, K.C.S., whose death is reported, entered the Madras Medical Department in 1855, and served during the Mutiny as Senior and Field Surgeon with the Central Indian Field Force under Sir Hugh Ross.

The western block of the Standard Life Office Buildings, Dalhousie Square, Calcutta, having been completed, the office of the Company has just been removed to the new building.

The "Sequel" Universal Cure Company, whose operations were to ruin all the doctors in the country, itself has fallen in grief, and is now in liquidation.

A Crown's Jury at England once brought in a verdict that "a three months' old child was found dead, and there was no satisfactory evidence that it had been murdered."

Thomas Edin, M.D., F.R.C.S., the distinguished Edinburgh surgeon, died at Edinburgh on the 14th February, at the age of 74.

VITAL STATISTICS.

| Towns and Districts. | Population according to last census. | Period. | Total Births. | Total Deaths. | Ratio per 1,000 of population annually. | Number of Deaths from | | | |
|---------------------------|--------------------------------------|---------------------------------------------|---------------|---------------|-----------------------------------------|-----------------------|----------|--------|--------|
| | | | | | | Cholera. | Measles. | Fever. | Other. |
| ANDAMAN. | | | | | | | | | |
| Swampy ... | 433,304 | { Returns not received. | | | | | | | |
| Kanpur ... | 684,248 | | | | | | | | |
| Bombay ... | 437,274 | | | | | | | | |
| Sylhet Dist. ... | 2,154,593 | | | | | | | | |
| BENGAL. | | | | | | | | | |
| Calcutta { Urban ... | 681,560 | { For the week ending 2nd November 1895. | * | 482 | 34.6 | 23 | ... | 200 | 36 |
| Suburban ... | | | | | | | | | |
| Howrah ... | 116,806 | | 8,519 | 8,524 | 28.68 | 232 | 89 | 1,756 | 573 |
| Patna ... | 165,192 | { From 1st August to 30th September 1895. | 10,754 | 12,892 | 21.96 | 1,052 | 67 | 7,338 | 456 |
| CHHAY. | | | | | | | | | |
| Bombay ... | 621,764 | { From 28th October to 5th November 1895. | 380 | 401 | * | 0 | ... | 67 | 13 |
| BURMA. | | | | | | | | | |
| Moulmein ... | 55,785 | { From 29th September to 5th November 1895. | * | 64 | 22.85 | ... | ... | 27 | 5 |
| Rangoon ... | | { From 27th September to 25th October 1895. | * | 327 | 28.5 | ... | ... | 60 | 25 |
| CENTRAL PROVINCES. | | | | | | | | | |
| Jubbulpore ... | 75,156 | { From 21st September to 19th October 1895. | 140 | 316 | * | 45 | ... | 143 | 138 |
| Nagpur ... | 117,014 | | 861 | 335 | * | ... | ... | 319 | 79 |
| Saugor ... | 32,736 | | 77 | 67 | * | ... | ... | 33 | 6 |
| MADRAS. | | | | | | | | | |
| Madras ... | 425,518 | { From 28th September to 1st November 1895. | 2,207 | 1,719 | 40.0 | 3 | ... | 643 | 300 |
| Madras ... | 47,429 | { From 16th August to 4th October 1895. | 378 | 309 | 25.4 | 1 | 1 | 31 | 36 |
| Trichinopoly ... | 90,609 | | 268 | 204 | 24.8 | ... | ... | 98 | 80 |
| N.W. PROVINCES. | | | | | | | | | |
| Ahmednagar ... | 163,895 | { For the month of October 1895. | * | 240 | 0.44 | 1 | ... | 194 | ... |
| Bangalore ... | 213,168 | | * | 578 | 0.94 | 21 | 2 | 496 | 38 |
| Cawnpur ... | 163,779 | | * | 895 | 0.66 | ... | ... | 230 | 1 |
| Lucknow ... | 244,508 | | * | 677 | 0.78 | 1 | ... | 454 | 36 |
| PUNJAB. | | | | | | | | | |
| Amritsar ... | 185,401 | { From 21st September to 12th October 1895. | 266 | 231 | 44 | ... | ... | 157 | 31 |
| Delhi ... | 189,448 | | 408 | 387 | ... | ... | 3 | 341 | 11 |
| Lahore ... | 159,587 | | 359 | 221 | 27.6 | ... | ... | 120 | 19 |
| Mooltan ... | 61,265 | | 158 | 111 | 1.45 | ... | ... | 15 | 11 |
| Peshawar ... | 63,079 | | 76 | 67 | 27.5 | ... | ... | 13 | 1 |

* Returns not complete.

OUR LONDON LETTER.

(From our own Correspondent.)

PROFESSOR ANDERSON STUART (University of Sydney) provided a patient, who had lost his voice (larynx ?) with an artificial larynx which is a singular success, the changing of certain rods contained in the instrument making the voice express, tender or hoarse, at will.

While enquiring from Leigh to London, the women's part of the R. B. team caught fire. The stewardess, EDITH GARDNER LAMBERT, of Forest-gate, Essex, rushed to their rescue and saved many lives; but as she was going to save a child, she perished in the flames.

The late Mrs. W. W. was the wife of a dwarf (Morgan), who was 25 inches high (and she shorter still) has been reported of being mother and babies are doing well.

Dr. WIGHT, the Police Surgeon of Holborn (London) who is charged with saving the death of a woman named FLETCHER by extensive laceration during forceps delivery, has been committed to the next Court without a witness stating that he was intoxicated while performing the necessary operation, Dr. Wight replied that as he was suffering from the sequelae of influenza, he had taken a large dose of potassium bromide. He has been admitted to bail, on two securities of £500 each.

The heat in London during the last week in September has been quite phenomenal. In the sun the thermometers have registered over 100°F. and on one occasion 120°F. and in the shade from 82 to 85°F. Numerous cases of sunstroke are reported. Some of them serious.

Surgeon-General Sir Thomas Layton, Surgeon to the

Quisp, and Professor of Military Surgery at Netley Hospital died suddenly at Swinage, Dorset on 1st October 1896. The French military expedition in Madagascar teaches some salutary lessons on malarial fever. As the engineers and sappers, who did a deal of road-making, suffered most severely when turning up the earth, and there are said to be over 3,000 invalids in various station-hospitals, while the homeward bound transports are crowded with sick. Scarlet fever is rife amongst us, and the fever hospitals are quite full. Several churches in North London have been entered. Organization is still the watchword chiefly of the Medical Practitioners' Association. A medical contemporary remarks that he does not see why we should support Lock Hospitals, while prostitutes lived in luxury; perhaps however, he might as sagaciously have added: "while gay women went freely about the streets distributing their venereal complaints broadcast." To say the least his arguments do not bear out medical experience in the prophylaxis of venereal diseases, and he ignores the facts that enforced segregation, with the licensing of houses of ill fame has done something in garrison towns, at all events, to lessen syphilis and gonorrhoea, &c.

T. LAUDOR BRUNTON, M.D., F.R.S., the talented Pharmacologist, has been appointed full physician to St. Bartholomew's Hospital.

DR. WILLIAM HICKMAN has committed *felix de se* by swallowing prussic acid. Dr. F. M. WRIGHT ROTTES (M.D.) met his death through attempting to enter a train, while in motion. Saline infusions are much under discussion in medical circles, their exact therapeutic value is still "sub lite." At a meeting of the French Medical Congress anti-cancerous serotherapy has been thoroughly gone into by Drs. BOUNET and G. FERRE. BOUNET says: The injections were not painful and rarely gave rise to abscess; but no cures have as yet been effected. Summing up: the injections often improve the general state, diminish pain and hemorrhage, and are devoid of danger. Dr. G. FERRE employed a serum from inoculated monkeys, treating 15 cases, all of which were in a serious condition. Dose employed was 4 c.c.; general condition improved; capillary hemorrhage lessened, pain abated, tumefaction of size of swelling was diminished.

We regret to announce the death of the Ophthalmic Specialist, Mr. FRANK HODGES, F.R.C.S., Edin. and M.R.C.S., Eng. who hanged himself at Leicester, while in a state of mental aberration.

The medical vacations are now in full swing, the sun heat being from 80°F upwards, in the shade. NABIULLA KHAN has left us for gay Paris, taking his body-physician, Dr. LILIAN HAMILTON with him. Sir HUGH BEEVOY found thyroid gland beneficial in a case of alopecia. Sir E. C. BUCK, Secretary, Indian Department of Argiculture, states definitely that during his stay at Sorrento that asthma was, and can be, cured by residing in the neighbourhood of orange lemon groves. It is proposed to build a much-needed hospital in South London near about Camberwell. Smallpox has visited us frequently during August and September, 520 variolous patients being now under treatment in hospitals of the Metropolitan Asylums Board. The "Drink Question" has again been discussed ad libitum in lengthy and erudite reports, but as the

harm of temperance is spreading fast, surely amongst the masses of the British population, the subject is ripe for legislation in that respect is responsible, as Sir DOCKRILL and TUCK long since stated for much efficiency, and for about 60 per cent. of the patients in the system. The Whitechapel guardians have been permitted to arrange for the payment of fixed fees to medical men for out-door attendance on the poor of their districts. The University College entertained 5,000 visitors (in Gower Street) who were received by Sir JOHN ERIC BAILEY, while the string band of the Royal Engineers furnished the music. Dr. MARAGLIANO's patients (pulmonary tuberculosis) have shown marked improvement from injections of anti-tuberculous serum. A bride of only 14 days has put a period to her existence by taking paraffin in repeated small doses. Professor LANK-TROTTER, of Netley has been reappointed as Professor of Military Hygiene for another term. The new buildings of the Royal Free Hospital just completed at a cost of £30,000 have been opened by H. R. H. the Prince and Princess of Wales. Helium and Argon, the two new chemical elements, are engaging the further attentions of Professor RAMSAY, who promises us at least two more fresh elements. Those mentioned above are monatomic? Density of Helium is 2.2, and it is the most insoluble gas yet known. The experiments of Drs. STUART, J. C. MARTIN and TIDSWELL on the poison produced by the femoral glands of the ornithorhynchus paradoxus show that (1) it is a proteid poison like that of other Australian snakes, and does not contain nucleo-albumen. (2) It is in June that the spur of the Platypus gives rise to its most virulent symptoms. Coagulation of the blood follows its introduction into the circulation; and capillary hemorrhage and oedema, when applied locally. Dr. H. D. LITTLEJOHN, M.D. Edinburgh (late President R.O.S.E.) is to be knighted. H. R. H. the Prince of Wales has accepted the Chancellorship of the University of Wales *vic* LORD ABERDEEN, deceased, and has recently laid the foundation of the extension of the Royal Medical Benevolent College, Epsom.

Potassium permanganate is still being tested in opium poisoning. Dr. ERNEST HART has published some papers on waterborne typhoid, from which much useful information may be gleaned by the progressive and studious physician, having in view the numerous fatalities occurring through out India and South Africa due to enteric fever. Sir R. W. RICHARDSON calls attention in *The Aesclepiad* to the increase of deaths from anaesthetics. News from America of the beneficial effects of antisyphilitic serum is confirmed in the clinique of Mr. COTTELL in London. Mr. JOHN LENTAGUE succeeds the late Sir GEORGE PORTER on the Council of the R.C.S.I.

The King of Italy has conferred the order of St. Maurice and St. Lazarus on Dr. VINTAS, Senior Physician to the French Hospital and Italian Embassy in London. Sir JOSEPH FAYER, F.R.C.S., F.R.S., and Sir GURAN HARTON head the Committee in proposing a memorial to Professor HUXLEY in connection with Charing Cross Hospital. Sir PHILIP STOKELY has been appointed Surgeon to the Queen-Empress in Ireland. Sir JOSEPH LARSEN, F.R.C., has been presented with his portrait painted by J. R. LORIMER, A. R. S. A., on the occasion of his retirement.

from the King's College Hospital. Dr. FINLAYSON (1889-90) has reported a case of bilharzia haematologica studied by Dr. E. JONES in a man who served in the Sudan and was admitted to the Western Infirmary with haematuria. The doctor showed microphotographs of this parasite in various stages of development from the egg hatched in pure water. No embryos were found in the urine as described by some authorities. He added that medical Egyptologists recognised the endemic haematitis described in the "Ebers papyrus," page 16, the date of which M. S. was about 1550 B. C. What about the anchylostoma duodenale, so common among the Fellahs?

Knighthood has been conferred on Mr. THORNTON STOKER and Dr. CHRISTOPHER NIXON (Dublin). In a Limerick Convent three persons died of irritant poisoning, which Sir CHARLES CAMERON has traced to a custard they had eaten.

A Parliamentary report tells us that Mr. JANEZ HOGG has been granted a Civil List pension of £75 in consideration of his scientific medical services. Dr. BERNARD O'CONNOR has failed to attain to Mr. CHAMBERLAIN'S Birmingham seat. Dr. KITASATO'S service to medical science has been recognised by Japan, the land which gives him birth, by the Government voting him money to be expended on his laboratory work.

The Duchess of Portland presented the prizes at the annual meeting of the London School of Medicine for women, when an address was read by the Dean, Mrs. GARRETT ANDERSON, M.D.

During last week there have been nine deaths from the explosions of cheap oil lamps. According to the report now issued for 1894 by the Inspector of Inebriate Retreats, there are 9 of these asylums doing excellent work, but seclusion in these Retreats should be made compulsory, not voluntary.

Brigade-Surgeon Lieutenant-Colonel E. J. FAIRLAND, of Netley, reports a case of Raynaud's disease following malaria acquired in Hong-Kong and treated with opium and quinine. We mention with the deepest regret the death of Sir JOHN TOMES, F.R.C.S., F.R.S., L.D.S. who has done so much for Dental Literature.

A new and apparently successful method of combating opium poisoning is by injections (subcutaneous) of strong coffee. The latest craze among the men and women of the Upper Ten is tattooing. A great loss is sustained by the profession by the death of JOHN SYR BRISTOWE, M.D., F.R.C.P., F.R.S. the talented author of a treatise on medicine, still a leading text-book among medical students and practitioners. It is proposed to treat infectious fevers by first wrapping the patient in sheets soaked in milk, and then giving them a warm bath.

H. I. H. the Emperor of Germany promises £500 towards a memorial to the renowned physiologist HELMHOLTZ. The Milner Fothergill gold medal has been awarded to Dr. EDMUND SMITH for his essay on "The Digestive Ferments."

The result of injections of anti-streptococci serum in cases of puerperal septicæmia, peritonitis, &c., have given marked success, if we are to believe continental authorities. Dr. KITASATO is, we are told, working out an anti-leprosy serum, the details of which have not yet been published in full. Leprosy is decidedly on the increase in Cape Colony.

Current Medical Literature.

MEDICINE.

A new Treatment of Seminal Weakness, with especial reference to Sexual Neurasthenia.

DR. ALFRED WIENER uses for this trouble, a special instrument devised by himself, which he has termed the *psychrophore*. The cases which are most likely to benefit from this method of treatment present the following symptoms:—Prostatic portion of urethra extremely sensitive and hyperæsthetic; there are frequent seminal emissions, causing exhaustion, more or less; erections are frequent, of short duration and imperfect. The sexual desire is very much diminished or absent altogether. The patient masturbates excessively together with these local symptoms. The patient usually complains of neurasthenia, depression of spirits, inability to walk, or to concentrate his mind upon anything, listlessness, insomnia &c. The *psychrophore* consists of a central bulbous piece for insertion into the rectum, having a concavity to fit into the prostatic portion of the urethra and two arms, for fitting on a cold waterbag to one end and an egress tube to the other. These parts unite to form a T-shaped instrument. The rectal portion is introduced and a stream of ice-cold water passes through and leaves the prostatic portion of the urethra, at an equable temperature being maintained the while. This application should be made for 10 to 15 minutes daily.

Twelve cases are cited, presenting in common the symptoms above enumerated. Some having in addition organic stricture and from a state of sexual impotence, and exhaustion have been so benefited by the treatment as to quite regain their wonted state of health, in from 3 to 6 weeks, which has been thereafter maintained.—Bromides are useful in the early stage of application of the *psychrophore*, to overcome the sensitive hyperæsthesia of the prostatic urethra. The author discountenances *urethral* psychrophorisation as being more difficult and painful to apply and less efficient in results.

The use of Aconite in Diseases of Children.

M. JULES CORNBY regards aconite of value in those diseases of childhood which are characterized by a *spasmodic* element. As in asthma, pertussis, laryngismus, stridulous palpitations, convulsions, &c. In spasmodic affections of the respiratory passages, J. SIMON finds a combination of aconite and belladonna useful. In diseases of the heart, to mitigate the effects of digitalis, aconite is often associated with it. (BLACHE). It may also be combined with opium for neuralgia and quinine for malaria fever. If the respiration is embarrassed, or the child depressed, prostrated and somnolent and the heart weakened, aconite, owing to its depressant action, is contra-indicated, e.g., in capillary bronchitis, pericarditis, valvular affections, diphtheria, typhoid, &c. In pneumonia, scarlet fever and variola, aconite often produces excellent results.

(2). Regarding the mode of administration, preparations made from the root of the wild plant are the best. Instance a preparation known as *alcoholature*, made by macerating for 10 days 1 part of the fresh roots in 1 part of alcohol at 80°. A syrup is sometimes made from this by combining 1 part of the *alcoholature* with 10 parts of syrup. Some French physicians use the *tinctoria* in preference to all other preparations.

MR. CORNBY condemns the use of *aconites* in children as being extremely active and very difficult to control. Small

case of influenza pneumonia was probably in large measure at least.

PREVENTION.

Hayes' conclusions apply to the above subject. He made a series of inoculations and cultivation experiments which he divided into three groups:—(1) Animals inoculated with the blood of influenza patients: 4 out of 7 rabbits previously injected with quinine were protected from the disease in various degrees. (2) Animals inoculated with PRIZREN'S bacillus. In 4 out of 4 rabbits previously inoculated with quinine no disease appeared, while 2 of the control animals took ill and died. In one case there was latent tuberculosis which at once became active as soon as the influenza caused diminished resistance in the animal. (3) Cultivations made from the blood of influenza patients and rabbits infected with influenza. The first of these cultivations gave negative results, in the second set, PRIZREN'S bacillus was revealed in 1 out of 3 rabbits previously protected with quinine and in 2 out of 3 not so protected. The author concludes that quinine is a good prophylactic, and to some extent a preventive of influenza. He gives 1 to 1.25 gramme on the first two days 0.8 gramme on the third, &c., and so on. Hypodermic injections have the advantage of not upsetting the stomach and of reaching the circulation more rapidly and directly. He gives details of 3 very severe cases of influenza and pneumonia so treated, with 2 recoveries.—R. M. J.

The Physical Signs of Abdominal Disease.

IN HAYES' lectures by LION is considered the effects of compression or as he terms it "corset disease." He describes three chief deformities. The first is a supra-hepatic condition with diminution of the antero-posterior diameter and the lower ribs being displaced outwards the liver is displaced downwards while the stomach assuming an almost vertical position, makes the transverse colon become V-shaped. In the second variety there is hepatic constriction, the liver increases in vertical extent and presses the pylorus and duodenum against the vertebral column, the result is dilatation of the stomach with perhaps hour-glass constriction. The third variety is considered as the most important. It is the sub-hepatic in the compression taking place at the level of the last rib and the lower margin of the liver, there is a displacement upwards of the liver and tension of the diaphragm causing dyspnea and palpitation. The transverse colon is also displaced, and constipation is caused, especially as the dyspnea prevents the patient leading an active life.

The Treatment of Malarial Hematuria.

Drs. H. A. HARR and WILMER KAUBEN present the results of a collective investigation, based upon one hundred and seven replies to questions which were sent out, the area covered being that having a death-rate from malaria of 70 per cent. or over. Thirty-two remedies were used: the first six were calomel, tincture of ferric chloride, arsenic, ergot, turpentine, and sodium hypophosphite, each remedy being used by ten or more physicians. Calomel is used in from 5 to 50-grain doses, and seems to be most in favor. Tincture of ferric chloride is used either alone or combined with arsenous acid in small doses of quinine. Arsenic is recommended from 1 to 5-drop doses (Powder's solution); the only caution stated is that the urine shall be clear. Sodium hypophosphite may be given in from 30 to 40 grains every three hours, after thorough purgation with calomel. Ergot is regarded as a haemostatic. Turpentine, in capsules, two drops every three hours until the urine clears, and a turpentine liniment in the lumbar region, may arrest renal hemorrhage.—Therapeutic Gazette.

Dr. CHAS. C. COLEMAN, of New York, has given a consideration of pain that arises from ulcers of the leg, and a return to a healthy condition of a patient who has received the proper treatment, whether it be surgical. For aetiological purposes ulcers of the leg may be divided by the author according to their appearance, as venous, traumatic, traumatic, etc. In traumatic cases, the patient is placed foremost thorough washing with soap and water and good scrubbing with a stiff bristle hair-brush. If the ulcer be inflamed, irritable, or painful anæsthesia may be required for this and subsequent steps. The next step is a thorough cleaning out of all soft granulations and the base of the ulcer with a sharp curette. The edges of the ulcer are freed from their attachment, and in many cases with a curved sharp bistoury he makes the circumference at intervals of about one-quarter of an inch. If much hemorrhage follows, a pad of gauze wrung out of a two per cent. solution of carbolic acid is placed over the wound and a firm compression bandage from the toes to the knee applied, the wound having previously been thoroughly cleansed with the carbolic solution. The dressing, when used, is allowed to remain for twenty-four or forty-eight hours after which he considers the ulcer to have become a simple one and amenable to treatment as follows: No further lotion is used. The wound is wiped off with dry cotton, and and completely covering it over he places strips of diachylon plaster to protect the ulcer. Over the surgeon's plaster he applies a pad of sterilized gauze held in place by strips of rubber adhesive plaster or often simply by bandages. He then uses a firm muslin from the toes to the knee, making a bandage of equable compression. Bandaging should be carefully done. Sometimes he uses two bandages three inches wide and eight yards long. This bandage is not removed unless the discharge comes through, or the leg becomes painful, or the bandage gets loose. When he redresses the ulcer he again uses simple dry absorbent cotton to cleanse the wound and proceeds as before. Often after two to three days the bandage may remain five or seven days without being disturbed. In some cases a thin scum forms on the ulcer, which must be removed by going over the surface lightly with a curette. When this treatment is adopted in ordinary cases about three weeks will suffice for an ulcer of even a dozen years standing. In extraordinary cases as much as six weeks may be necessary.

Replantation and Transplantation of Teeth.

AN interesting paper on this subject was read by Dr. BENEDICT at a meeting of the Army Medical Staff at Edin. Fest. He said that AMBROSE PARR was the first who performed replantation of teeth, and was followed by SURROTT and POMARRET the latter of whom recorded a case, where a tooth which had been extracted by mistake was replaced and eventually adhered. WELCH has performed eighty replantations among which two have failed, and he also proved by experiments on dogs that absolute integrity of the periodontum is one of the most important conditions of a permanent adhesion of the tooth. By replantation Dr. BENEDICT found an operation by which a tooth is inserted into living tissue, with which it must enter into intimate contact. He distinguishes between replantation and transplantation, the latter consisting in the transplanting of a tooth from one person to another. In his experiments he used a tooth from a dog, which he showed to be a dog's tooth, and with a slightly granulated, the tooth being a specimen of a tooth. The wound was closed with a

...and the tooth was removed from the socket. The tooth, which was to be replanted, was preserved in alcohol. After two days a reddish head was to be seen, and the tooth could be moved backwards and forwards in the gum, it was usually fixed. According to Dr. BENEDICT, the indications for the above operation are loosening of the tooth, caries, and inflammation of the periosteum surrounding the root. A tooth which has been removed from its socket by mistake on the part of the dentist or by violence should be replanted. In the case of toothache from caries where it is impossible to apply any remedy to the painful place the tooth may be extracted, filled with stopping after removal, and then replaced. Dr. BENEDICT proposes that the tooth should be carefully extracted, avoiding injury to the socket of the surrounding gum, for a fracture of the alveolus would render subsequent union impossible. The root is then to be trimmed smooth as it is rough and eroded, and the tooth is to be replaced after the removal of the pulp and the disinfection of both tooth and alveolus with sublimate. The operation is followed by no great pain and by only a trifling inflammation of the gum.—*Lancet*.

Ophthalmia Neonatorum.

THE statistics given by HAUSMAN of the inmates of blind asylums made blind by this disease was: In Copenhagen, 8 per cent.; Berlin, 20 per cent.; Vienna 30 per cent.; and in Paris, among 208 blind, young subjects, 45 per cent. In 1879 among the young persons admitted to the blind institutions of Germany and Austria, 33 per cent. had been made blind by this disease.

In different countries the variation was from 20 per cent. to 79 per cent. In Philadelphia, in 1871, out of 167 inmates of the blind asylum, about 20 per cent. had been admitted for this cause.

Since prophylactic measures have been resorted to in lying-in hospitals, it had the effect of reducing this number from 12 per cent. to 3 per cent. in Halle, and in Leipzig, where CREDE used his own method, the cases fell from 75 per cent. to 0.5 per cent. The treatment consisted in putting a single drop of a 2 per cent. solution (gr. x to ʒj of water) of silver nitrate between the lids of each eye. Practically the same results have obtained in the United States. In the 158 inmates of the Berkeley Institute, California, of 36 cases of binocular blindness 25 per cent. was caused by blennorrhoea neonatorum.

Hayes found that while from 1870 to 1880 the population of the United States had increased 80 per cent. the number of cases had increased 140 per cent.; the number decreasing from the east to the west, but increasing from the north to the south.—*Canad. Pract.*

Acute Genorrhoeal Rheumatism.

DR. HOWARD LILIENFELD has a preference for oil of wintergreen and sodium bicarbonate, with considerable attention to the alkalies in the treatment of this disease. The diseased joint should at once be put at rest upon a splint of such proportions that as much comfort as possible may be obtained. Gentle compression over a dressing of ichthyol ointment, twenty to fifty per cent. or other mercurial ointment, or over an antiseptic wet dressing, should be applied by bandage. If the disease seems to be manageable, gentle massage is valuable during convalescence; but if ankylosis is inevitable, it should be resisted by perfect fixation in plaster of Paris. The indications for the diet are: meat, eggs, milk and its preparations, butter, whole wheat and easily digested food, should be taken upon the patient every two hours or oftener, and at intervals should be kept at all nourishment taken.—*Am. J. Med. Sci.*

Stomach Surgery.

Gastroctomy.—(1) The smallest amount (in the first case) of antiseptic possible should be used; (2) all antiseptics should be avoided in the stomach cavity; (3) the extra-peritoneal method of resection should be adopted, the posterior part of the ring of stomach is surrounded by gauze, and the situation of the remaining stomach should be permanently extra-peritoneal, the anterior wall of the stomach is covered in by a flap of skin; (4) the patient should be fed early by the mouth.—*LANGEHAUS*.

In Prolaps of the Rectum.—Sometimes much relief is obtained by injecting, before going to the chair, from ʒiij. to ʒviij. of warm water, and afterward an ounce of cold water, and allowing it to remain.—*KIRBY*.

Treatment of Burns.

| | | | |
|-----------|-----|-----|--------|
| Aristol | ... | ... | 5-10.0 |
| Olive-oil | ... | ... | 20.0 |
| Vaseline | ... | ... | ... |
| Lanoline | ... | ... | 40.0 |

—HARR.

Gonorrhoea.

| | | |
|-------------------------|-----|---------------|
| Perochloride of mercury | ... | 1 part. |
| Antipyrin | ... | 100 parts. |
| Distilled water | ... | 10,000 parts. |

The injection should be used four times a day and retained as long as possible. The addition of antipyrin prevents smarting.—*VATIER*.

Chordee.

| | | |
|--------------|-----|--------|
| R. Ex. opil | ... | gr. j. |
| Camphore | ... | gr. x. |
| Ol. theobrom | ... | q. s. |

M. et ft. Suppository No. 1. Sig.: Use at bedtime.

—KROHN.

Gonorrhoea Second Stage.

| | | |
|---------------------------------------|-----|----------------|
| R. Hydrarg. chlor. corros. | ... | gr. j. |
| Acidi carbolici | ... | 3 iss. |
| Zinci sulpho-carbolatis | ... | gr. ss. |
| Boro-glyceride (fifty per cent. sol.) | ... | ʒj. |
| Aque rose | ... | q. s. ad. ʒvj. |

M. Sig.: Use as injection after urinating.

—WHITE.

Incontinence of Urine.

| | | |
|-----------------------|-----|------------|
| R. Sodii benzoatis, | ... | ss gr. ss. |
| Sodii salicylatis | ... | gtt. ʒj. |
| Fld. ext. belladonnae | ... | ʒiv. |
| Aque cinnamon | ... | ʒiv. |

M. Sig.: A teaspoonful four or five times daily.

—WHITE.

Trichophytosis.

| | | |
|--------------------|-----|--------------|
| Chrysarobin | ... | gm. 10 to 25 |
| Salicylic acid | ... | gm. 5 |
| Ointment of styrax | ... | gm. 5 |
| Ichthyol | ... | gm. 5 |
| Simple ointment | ... | gm. 5 |

—WU CHANG.

N. Y. Med. Rev.

OBSTETRICS AND GYNECOLOGY.

Unruptured Hymen at full term of Pregnancy.

EDWIN T. ENOB, M.D., New York, writes to the *Lancet*:—The following case, although not by any means unique, I think, sufficiently rare to make it worthy of record. All have heard and read of such, but in an experience of something like 4,000 labors, extending over a good many years, I have never personally met with such a one before.

The patient was a woman about forty-two years of age, who had been married ten years. Her husband, unmarried previously, was a very corpulent man, apparently of the age of

forty-five. On examination I diagnosed the existence of a perfect hyaline, which admitted the passage of the index finger without difficulty, but not of the first and second fingers without risk of rupture. The presentation was normal, the head being in the best position; the membranes were intact. The labor was very slow. When the dilatation of the os was practically complete I ruptured the membranes, and twelve hours later delivered under chloroform, administered by my friend, Dr. BAWEN. The hymen was ruptured in the application of the forceps, but there was no perineal laceration and the child, a well-developed female, was living. The total duration of the labor was forty-five hours. Both mother and infant are doing well.

One Hundred and Thirty-three Cases of Placenta Prævia.

BOSS collected these cases, which occurred between April 1884 and April 1894, in two institutions in Breslau. In one of the hospitals the proportion of placenta prævia to normal labor was 1 in 216, in the other 1 in 42—a remarkable difference. In 27.9 per cent. the placenta was central, in 61.6 lateral, in 10.5 marginal. The percentages of presentations were as follows: Head 66.2, breech 1.8, footling 8, and transverse 24. Of the total 138 mothers, 8 died; 5 from direct effect of loss of blood, and 3 from fever or exhaustion after the first week. Twenty-seven per cent. of the children were born alive. As for management, the tampon, with expectant treatment, was applied in 7 cases, rupture of the membranes with forceps in 9, forced labor in 1, and combined version in 115; in this latter category all the maternal deaths occurred. The cases, however in which combined version was employed, were all severe. One patient died from air in the veins nine hours after labor.—*Brit. Med. Jour.*

The use of Pelvimetry in Gynecology.

GEORGE W. DOBBIN says:—Pelvimetry is not appreciated by the gynecologist as by the obstetrician. KALY, who first called attention to the subject, described a very simple method by which the true conjugate could be ascertained with a fair amount of accuracy. The patient lies in the dorsal position, the legs flexed slightly on the thighs, and the latter on the abdomen. The operator faces her on her left side, and "with the palmar surface of the open left hand directed downward, he makes, with graduated pressure, deep palpation in the median line directly over the superior straight, feeling for the promontory of the sacrum with the tips of the fingers." These should be allowed to glide to a point immediately above the promontory and remain there: the posterior point of the antero-posterior diameter is thus fixed; the middle finger of the right hand is now passed behind the symphysis pubis over its most salient point and then turned up, and a mark made with the finger nail on the palm of the left hand. The distance from this mark to the tip of the middle finger of the left hand gives the conjugate diameter. The chief source of error in this proceeding is from pressing against the promontory instead of allowing the fingers to rest just above it.—*Amer. Jour. of Obstet.*

Hyperemesis Gravidarum: Difficulty in Inducing Abortion.

CHARPENTIER observed uncontrollable vomiting, from the beginning of pregnancy, in a secondipara, aged 28. At the third month the state of the patient was so grave that it was necessary to provoke abortion. A rubber bougie was passed into the uterus, and another on the following day, then a dilating bag, then Hagar's dilators from the smallest to the largest. Lastly, nitrate of silver was applied to the

uterine cavity. The same day the operation was performed. The patient recovered. She was hysterical, and CHARPENTIER believes that hysteria is often the cause of uncontrollable vomiting in pregnancy.—*Brit. Med. Jour.*

Latent Gonorrhoea in Women.

DR. W. E. PRYOR believes that in a majority of prostitutes and in almost all women who have had gonorrhoea, there may spring up, from irritation of any kind, a discharge containing gonococci and differing only in degree from that due to recent infection.

Microscopic examination of the discharge collected from the cervix, urethra, and the vagina, of a large number of patients, many of whom complained of no local discomfort at the time, led to the opinion that a purulent discharge from the genitals rarely existed without gonococci being present in it or in the tissues producing it. The gonococcus is frequently present when there is no perceptible discharge of any kind, and while the vaginal discharge is rarely free from other pus-producing organisms and may even appear to contain no gonococci, the scrapings by a Volkmann's spoon will usually shew the tissues of the cervix to contain gonococci generally without other micrococci. The author draws the evident conclusion that one is not able by simple inspection to declare a patient free from gonorrhoea.

The experience of the author is that, after a woman is infected, she rarely is completely cured of this disease. This is due to two causes: she will not persevere in treatment after the annoying symptoms disappear, and when the cervical racemose glands are invaded, it is almost impossible to eradicate the disease from them. The stronger preparations of iodine seems to be more effective for this purpose than other remedies.—*Jour. Cut. and Genito. Uria. Dis.*

Vaginal Hysterectomy on a Large Scale.

LANDAU has removed the uterus through the vagina 277 times during the past nine years; 13, or not quite 5 per cent of the patients died. In 112 of these cases the disease was cancer or sarcoma of the uterus; 8, or a little over 7 per cent, died; 1 sank from diabetic coma, 1 from obstruction, and 1 died from sepsis due to abortion, which complicated the disease and the operation. In 56 of the series the uterus was removed for fibroid; in many instances the tumour reached as high as the umbilicus; 4, or over 7 per cent, died, 1 sinking from failure of the heart's action on the twenty-second day, and another from chronic nephritis on the nineteenth day; 109 patients underwent the operation for bilateral chronic septic or inflammatory disease of the appendages; 1, or less than 1 per cent, died, the fatal end being due to diffuse septic peritonitis; 1 suffers yet from a small entero vaginal fistula. The remaining 107 have all been restored, in most cases after years of discomfort or pain to perfect health. LANDAU adds 2 cases of vaginal hysterectomy for acute puerperal sepsis with multiple collections of pus in the pelvis; 1 of the 2 died of purulent peritonitis. LANDAU did not operate in the same manner in all the 277 operations; sometimes he removed the uterus entire, in other cases he bisected it vertically, whilst in some he removed it by morcellation.—*Brit. Med. Jour.*

A Rare Obstetric Anomaly.

M. PEAN, the French surgeon, lately performed a successful operation on a young girl who suffered from incontinence of urine, caused by the presence in her vagina of a super-numerary bladder and urethra. Cases of this description are extremely rare, and where they do occur it is hard still to find them entirely amenable to art.—*Proc. Med. Socy.*

Ichthyoides Fæces.

Treatment as follows:—A ten per cent. ointment of cocaine to be applied and bromides administered internally; at the end of a week the affected parts are to be painted with tincture of iron twice a week; under this treatment the burning and smarting soon diminished and the fissures healed. Next the parts were smeared with Lassar's salicylic paste, and finally tampons were applied soaked in a ten per cent. solution of ichthyol resorcin. In two months the parts assumed a natural appearance, and recovery was complete.—*BRICKE, N. Y. Med. Rec.*

The Maternal Impression Theory.

HARTMAN describes the birth and anatomical structure of a double monster (*cephalothorax copagus*), and notes that the mother was alarmed, when pregnant, by seeing in the forest a newborn fawn shewing a similar monstrosity. She considered that that adventure was the cause of the malformations in her child, and **HARTMAN** seems inclined to support her opinion.—*Brit. Med. Journ.*

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PHYSIOLOGY. PATHOLOGY AND BACTERIOLOGY.

The Maternal and the Fætal Blood at Birth.

As the result of a series of clinical observations, **ELDER** and **HUTCHISON** have found that the blood in the newly-born child is relatively richer in red corpuscles than that of the adult by from 350,000 to 500,000 per c.cm. For a short time after the birth (up to about two days) the red corpuscles seem to increase in number. This is probably due to the fact that the total volume of blood is less, from the fluid lost from the body during this time being in excess of that absorbed. Thus concentration of the blood is produced. After the second day or so the red corpuscles gradually decrease. The number of red corpuscles varies much more than in adults, probably because of greater variations in the total volume of the blood. At birth there are always present a considerable number of nucleated red corpuscles. They vary, however, in number in different cases. About the sixth month of intrauterine life the number of nucleated red cells is very much greater than at birth. They probably decrease in number during the later months of pregnancy, and altogether disappear from the blood a few days after birth. The blood of the newly born child is relatively much richer in hæmoglobin than that of the adult. The mother at parturition is anæmic. In any individual case the blood of the mother is considerably poorer in red corpuscles per c.mm. than that of her child, and it is still more deficient in hæmoglobin. Both the blood of the mother and that of the child contain a longer number of white corpuscles than normal adult blood. The blood of the mother may be quite as rich in white corpuscles as that of the child. The blood of the child contains a distinctly larger proportion of lymphocytes and a distinctly smaller proportion of neutrophile leucocytes than the blood of the adult; the number of eosinophile cells seems to be slightly deficient. At the sixth month this excess of lymphocytes is probably even more marked than at birth; these probably decrease during the later months of pregnancy. After parturition the number of white corpuscles in the blood of the mother (at least when she suckles her child) decreases markedly in a few days.—*Edinburgh Medical Journal.*

The Blood in Syphilis.

In 1889, **SEMOLLA**, after working upon the subject, advanced certain propositions regarding the changes in the blood

produced by syphilis. These were as follows:—1. Constitutional progressive syphilis not treated with mercury causes a diminution of the red corpuscles and of hæmoglobin. 2. If a syphilitic person in whom this diminution is observed is treated with mercury, from the first day of treatment there is an increase of hæmoglobin and of red corpuscles. 3. If, however, the mercurial treatment is continued longer than necessary, so that the mercury loses its specific power, its tonic action will produce a diminution of hæmoglobin and red cells. 4. If mercury is given to a healthy person, there appears to be rapid diminution of hæmoglobin and red cells. **JUSTUS** has lately been investigating the subject, and has recently published his results in the *Wien. Klin. Rund.* Some of them are directly contradictory to **SEMOLLA's** propositions. **JUSTUS** considers:—1. In untreated syphilis the hæmoglobin is more or less diminished, varying with the severity of the disease and its tendency to spontaneous recovery. 2. A sudden diminution of hæmoglobin follows inoculation or injection of a large dose of mercury. 3. The diminution caused by mercury varies according to the severity of the disease and to the condition of nutrition; with injections of mercury, the fall of hæmoglobin can be repeated after several injections. 4. The cure of the syphilitic lesions begins when the fall of hæmoglobin ceases, and is followed by a rise. 5. The sudden fall of hæmoglobin, due to mercurial treatment, is a specific peculiarity of the blood of syphilitic persons only, and does not take place in healthy individuals or in other diseases. 6. This specific reaction of the blood is established at the time when swelling of the gland occurs; it disappears at the time when the existing syphilitic lesions attain the height of their development. **JUSTUS** believes that a specific change occurs in the blood of syphilitic persons, and that this points to a specific means of treatment applicable only to the blood of syphilitic persons. This specific condition of the blood, established by the action of mercury, precedes the affection of other organs; and the disappearance of this specific reaction or the involution of the specific blood change, occurs before retrograde changes appear in other organs. The cure by mercury is in all cases not absolute, but only varies according to the duration of time. The application of **JUSTUS's** statements to diagnosis is this:—In doubtful cases, and in cases of late syphilis with a fresh train of symptoms, a diminution of hæmoglobin, after injection with mercury, is characteristic of syphilis.—*Med. Times and Hosp. Gaz.*

Pathological Anatomy of Progressive Muscular Atrophy.

CRAMER gives a summary of the published cases in an exhaustive paper, and draws the following deductions from the data: (1) Some forms of muscular atrophy which have lasted even for as long as ten years show by our present methods no changes either in the central or in the peripheral nervous system. These forms of muscular atrophy come under the heading of those cases which **HAS** has included under the name of "dystrophy." (2) The atrophies which occur with recognisable spinal lesions present very different clinical pictures. With the same spinal lesion there may be either the symptoms of dystrophy or of spinal muscular atrophy. Even an isolated disease of the cells of the anterior cornu may give rise to the most different clinical signs. Dystrophy may therefore occur with a spinal lesion or the peripheral and central nervous system may remain intact. (3) Cases are to be found intermediate between all forms of muscular atrophy, with and without lesions in the nervous system. (4) The appearances in the muscles are the same whether the central nervous system partake in the disease or not. (5) The pathogenesis of muscular atrophy is still obscure.

Unsanitary and Unhygienic Development.

It is the duty of the medical thought of the day to pay heed to the sources of disease. Overcrowding in cities, child-labor, unsanitary and unsympathetic toll by the mothers, are some of the potent causes of these crimes, and they appeal to the hygienist and to the legislator on the basis of race deterioration and harm to the State.

The absolutely dissolute should be isolated and their labor made productive; first, to prevent the transmission of their pernicious qualities; secondly, to relieve the State of the burden of their maintenance in asylums and reformatories. —H. H. Longsdorf.

A Medical Libel Action.

At the Victoria Courts, Birmingham, on 14th, September Mr. BARNES, acting as Under Sheriff for the county of Stafford, sat with a jury to assess damages in an action for libel, which the defendant had allowed to go by default at the answer.

The case for the plaintiff, Dr. H. SHORE, of Walsall, was that in a letter which was written by the defendant to a local newspaper he had been libelled. The letter was written in reference to an inquest which had been held on the body of CAROLINE JOHNSON, aged 76, the mother of defendant, owing to Dr. SHORE'S refusal to grant a certificate. After hearing the evidence the coroner's jury had returned a verdict of "Death from natural causes." Mr. D. S. JOHNSON, in his letter, complained that "he thought it a cruel injustice to have an inquest forced upon him when such a thing was in his opinion, entirely unnecessary." He further made the following statement, that "at the inquest Dr. SHORE was asked by the coroner what the deceased was supposed to be suffering from when he was called in, to which the doctor made the startling reply: "Fracture of the hip and other injuries."

"Now this is a most wilful untruth, as neither my sister nor I ever expected such a thing. The coroner then asked him what was his opinion as to the cause of death, when he replied: "The mental changes consequent upon old age accelerated by erysipelas....." Now this I find to be absurd. He further remarked that she might possibly have lived another fortnight if erysipelas had not set in, but not longer. Then I ask why I should be put to the outrageous ceremony of an inquest with its attendant and false reports in the evening papers?"

There was a further passage in the letter which the editor struck out, imputing that "the inquest fee of £11s. proved too great a temptation for him, (Dr. SHORE). It was contended that the defendant by his letter imputed to the plaintiff that he had committed wilful and corrupt perjury at the inquest, and that he was ignorant and unfit to perform the duties of a medical practitioner; also that he refused to give a certificate of death in order that he might obtain the inquest fee. Damages to the extent of £100 were claimed. Judgment went by default, and the case was remitted to the Sheriff for the purpose of assessing the damages. At this point the defendant attempted to re-open the case, but was promptly checked by the learned judge, who refused to allow him to speak on other than the question of damages. It was held that the plaintiff need not prove any specific damage, but that any suspicion of the kind indicated upon a professional man was a subject for damages.

The defendant spoke on his own behalf in mitigation of damages, and stated that he would have settled the matter out of court, but that the prosecution insisted upon a publication of the apology, and this he would not consent to allow.

The Under Sheriff came up to the point that it was of this nature upon a medical issue might be the subject of damages, but that it would not do for the jury to estimate the damages at a larger amount than the defendant would pay. He pointed out that the defendant, by persisting in his position that the libel was true after he had allowed judgment to go against him by default, had made the matter most serious, and the jury might, if they thought fit, take this into account.

The jury returned the damage at £10.

The remark of the Under-Sheriff upon returning the verdict that the defendant was a "very lucky man" will be echoed by all the members of the profession. It is difficult enough for medical men to defend their professional honor against the attacks of unprincipled persons, as to do this entails expenditure of time as well as money, but it will be doubly difficult when a jury estimates the damage admittedly sustained (the defendant in this case having attempted no defence) at such a low figure. Dr. SHORE is to be congratulated by all of us on his pluck in bringing this case forward, but we must also sympathize with him on the verdict. We notice that apparently Dr. SHORE was not a member of any defence union. —Brit. Med. Journ.

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THERAPEUTICS AND PHARMACOLOGY.

Serum Therapy of Cancer.

SALVATI and GARTANO give the result of their clinical experience in the treatment of cancer by injection of serum derived from a horse which had been previously inoculated (through the trachea) with an infusion of triturated sarcoma. Five patients suffering from undoubted cancer, mostly relapses after previous operation, were subjected to the treatment. No ill results were observed after injection. The lancinating pains in the majority of cases disappeared completely for a time—after 10 to 20 injections—but as a rule returned again with their previous intensity. Hemorrhage from the ulcerated surface was a frequent occurrence after injection. The tumours were observed to diminish in size in the early part of treatment. Still, notwithstanding the manifest improvement at the beginning of treatment no real arrest of growth took place in any of the cases, so that one cannot speak of the treatment of malignant growths by injection as in any sense a cure. —Brit. Med. Jour.

Honey in Erysipelas.

Dr. C. E. HAYWARD, of Crofton, Ill., writes: "Several years ago, while treating some bad cases of erysipelas, a lady asked me why I did not use the remedy they used in Montana. I asked her what that was; she said honey. I did use it and found it very effective, and since then have used it in every case of erysipelas on any part of the body. My first treatment is the external application of honey. I wash the head and face if necessary, spread the honey thickly on cloth, cut holes for eyes if the face is the part affected, and change the application every three or four hours. I have never had it fail to relieve the pain, heart swelling, and nausea, and to shorten very much the attack. I also give internally the usual remedies for reducing the fever and stimulating the excretories. Three or four days usually suffice to bring about convalescence under this treatment. I have treated numerous cases, but would rather every physician would give it a trial, and I am sure he would find a practical solution to his erysipelas." —N. Y. Med. Jour.

Oil of Capsaicin in Rheumatism.

CARRUT has been known as a great scientific observer and educator for more than five centuries, and it long engaged

repetition as a remedy for apoplexy. In 1861 M. DELVAX recommended Cod liver oil for chronic affections of the respiratory organs, claiming that it led "to diminution of the dyspnoea and cough, and an easier expectoration." During the recent epidemic of typhoid in Dublin, Doctor GEORGE FOX used cod liver oil as a diffusible stimulant in atrophic pneumonia, for which he thinks it particularly suited. It is as quick and powerful a cardiac stimulant as alcohol or ether, and, like these, relaxes the heart by dilating the systemic arterioles; but, unlike ether, it does not diminish sensitiveness of the respiratory centre. He prescribes six-drop doses in molasses, repeated at short intervals; and sometimes adds quinine and tincture of nux vomica.—*Medical Press and Circular*.

Treatment of Diabetes.

ASCOLI reports the case of a man, aged 60, who had suffered from diabetes for two years. The ordinary methods of treatment were tried but without any particular benefit. In the spring of 1895, the symptoms being more acute, inhalations of oxygen were tried. This mode of treatment was practised from March 7th to June 16th, with one week's interval in May. On an average 180 litres of oxygen were inhaled daily. After a few days the urine began slowly to diminish in quantity, lose its high specific gravity, and the sugar sank to 1 per cent. At the end of April the sugar disappeared entirely. In the early part of June no sugar was found even after a meal rich in carbo-hydrates. The body-weight increased 2,500 g. under treatment. The usual dietetic restrictions were observed.—*Brit. Med. Jour.*

An Improved Method of Administering Cod Liver Oil.

WM. F. WAUGH, A.M., M.D., Professor of Clinical Medicine, Postgraduate College of Chicago, in an interesting article on this subject contributed to the *Medical Brief*, in comparing some of the various preparations, says in part: "But a more elegant method of administration is that of Frederick Stearns & Co., of Detroit. The firm prepares wine of Cod liver oil with peptonised iron, which can be taken with readiness by any one who can take wine. There is nothing oily or fishy about the taste, either at the time it is taken or afterwards. During the past winter I have had an opportunity of testing this preparation in many cases, especially at my clinic at the Post-Graduate College. Several forms of pulmonary tuberculosis were treated by it, and with good results. In no case did the wine disagree, even where there was a marked fever. A number of cases presented themselves for debility following influenza, with great mental depression, physical debility, and presenting the clinical picture of neurasthenia. Four of these were treated with this wine, with steady and pronounced improvement. In one case where anaemia had developed, and was progressing in spite of various tonics, the malady was arrested by this wine, and had the hue of health restored to the countenance. In several cases of valvular heart disease, with failure of compensation and evidences of degeneration, the nutrition of the heart seemed to be much improved by the use of the wine.

From the results of a trial in at least twenty cases of the affections named, I would say that in this wine of cod liver oil we have a reconstructive of great value, from which we may obtain all the advantages of cod liver oil, without its very obvious disadvantages. I am pleased to be able to give this commendation to a preparation that is of American origin, and whose composition is plainly stated, so that any physician may prescribe it in such cases as he thinks fit without being compelled to take it on the faith of the import-

er or manufacturer. When the latter simply shows the nature of his products, relying on the purity of the material and skill of its preparation alone for their claims, the physician can utilize the articles, and recommending them intelligently.—*N. Y. Med. Times*.

Pharmaceutical Receipts.

Chlorine Mixture for Throat-affections.

| | | | |
|----------------|-----|-----|------|
| Potass. chlor. | ... | ... | 3i. |
| Acid hydrochl. | ... | ... | mxl. |
| Syrup | ... | ... | 5i. |
| Aque | ... | ... | 5i. |

Drop pot. chlor. into the bottom corner of a dry 8-oz. bottle and pour acid on it. Cork, and when Cl has ceased to be evolved add water and shake well. Add this to syrup in 2-oz. bottle.

Dose: Half a teaspoonful in water every two hours.—*C. & D.*

Antikamnia.

| | | | |
|---------------|-----|-----|---------|
| Acetanilidi | ... | ... | 65 gra. |
| Sodii bicarb. | ... | ... | 30 " |
| Caffeine cit. | ... | ... | 5 " |

Aristol.

| | | | |
|-----------------------|-----|-----|---------|
| Iodl | ... | ... | 98 gra. |
| Potas. iodidl | ... | ... | 129 " |
| Thymol. | ... | ... | 212 " |
| Sodae caustic | ... | ... | 309 " |
| Sol. calc. chlorinatæ | ... | ... | q.s. |

Dissolve the first two in 8 oz. aq., the next two in 8 oz. more; then mix both solutions in a $\frac{1}{2}$ gallon glass vessel, in which they can be stirred briskly while gradually adding solution of chlorinated lime. Be careful towards end so as to leave it only in slight excess. Collect on a filter, and dry in warm place.—*C. & D.*

Chloral in Haemoptysis.

DOCTOR J. PALVY injects from fifteen to twenty-five grains per rectum. The effect is produced within one-half to three quarters of an hour. The chloral is also a valuable prophylactic.—*Amer. Med. Surg. Bull.*

Emulsion of Iodoform.

| | | | |
|-------------|-----|-----|-------------------------|
| R. Iodoform | ... | ... | 20.0 (dr. v) |
| Glycerine | ... | ... | 80.0 (oz. j, dr. viij) |
| Aque dist. | ... | ... | 100.0 (oz. liij, dr. j) |

M. et fiat emulsio. For surgical practice.

Correspondence.

"PICKED MEN OF A PICKED SERVICE." OFFICIAL BOASTING STILL FURTHER UNVEILED.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—It seems most unfortunate for the discussion that has been raging in the public press on the "Medical Practice Question in India," that some boastful official should have dared to cross swords with his non-official opponents, for the simple reason that the official stronghold is admittedly honeycombed with anomalies, jobberies, inconsistencies and bare-faced scandals of sorts, that could ill afford to have the electric light of public criticism turned upon them. To attempt to bolster up the official cause by any form of argument, meant nothing more than to compel the non-official element to gird up for looks and meet its assailants on their own ground. Unluckily for official medical practitioners, their "free-lance" has entered upon personalities; for while decrying the qualifications

and twisting the idea of their fitness for Hospital and Educational work; he has lauded the *non-official* *sovereigns* up to the skies. "They are all senior men of large Indian experience, they are men who have come to the front rank of their service for special proficiency and attainments in particular lines of their profession or in special branches." "They are men selected by Government and have made their mark in the *motusil*, men who have extracted thousands of cataracts, who have operated hundreds of times for stone, who have constantly performed major operations, who have frequently removed ovarian tumours!"

They are ovariometomists, lithotomists, men who have done scores of ovariometomies, hundreds of operations for stone, cataracts and so forth. Are they the *specialists*, our official apologist and advocate makes them out to be?

Now I maintain that they are not so. Almost every Indian Medical Service man, who is appointed to a chair in the Calcutta Medical College, is and was (going back to the earlier and even modern history of the College) NO SPECIALIST, whatever time, opportunity and practice may have made of him subsequently. Let us begin with Surgery. SIR JOSEPH FAYRER may be dismissed with a mere reference to his work called "*Clinical Surgery in India*." A more fatalistic record of surgery can hardly be found. He *did* surgery as this book shews, but we stand appalled at the results. Succeeding FAYRER came BOWEN PARTRIDGE, a born surgeon and a most successful and brilliant operator. His equal has not been found since he retired. But with all his latent and inherent surgical skill, PARTRIDGE came to the Medical College *not* as a specialist in *surgery*, but to fill the chairs of botany and chemistry! He *was* not a specialist in surgery, he certainly *became* one afterwards. PARTRIDGE was succeeded by KENNETH MCLEOD, another excellent surgeon, a man who did credit to the choice of Government, but the records of the College prove that MCLEOD came to his work *not* as a specialist, but as a novice. His office for years as Secretary to the Surgeon-General was not calculated to inculcate either a love for anatomy or zeal and efficiency in surgery. MCLEOD is alive and well, and will not deny that *lithotomy* was *not* a successful operation under his knife. MCLEOD was followed by RAYE, and the latter by O'BRIEN, but without going into details of the work of men still among us, I will only say that I may safely challenge DR. JOUBERT to prove by any record of statistics, official or private, that either of these able and learned gentlemen approached the chair of surgery with the mantle of a SYME or a LISTER, or with the reputation for surgical skill of a TREVES or a WALSHAM, or a JOSEPH BELL.

Now to obstetrics and gynaecology. In my last letter of the 1st November, I shewed beyond doubt, that recent appointments to this chair, in no way supported DR. JOUBERT's boast that their incumbents came to their office imbued with "special proficiency and attainments in this special branch." Going backwards in this chair, surely our official apologist knows that DR. HARVEY came to his work in this line as a novice and had to be trained by DR. T. EDMUNSTON CHARLES, his predecessor. A man who has filled the chair of obstetrics or gynaecology in Calcutta, has come to it with the reputation of being

an ovariometomist, though the boast is that "they were men who had a record of doing scores of ovariometomies." The fact is exactly the reverse. Our "professors" in this "line" were *not* ovariometomists, if the fatal records of the statistics of this operation are to be relied on during the incumbency of Professors CHARLES and HARVEY. Let the record be published and my assertion will be amply vindicated. So much for this vain boast. But why go further! A mere *Gazette* republication of the various incumbents will prove that with one or two rare and recent exceptions the officials who have been pitch-forked into these Hospital and Educational appointments at the time of their "gazetting," could hardly in a single instance, come honestly within the scope of being styled "picked men of a picked service and in the front rank for special proficiency in special branches." It is true they are often "picked men," but "picked" not for merit and skill, but for reasons which "social officialism" might more competently and conveniently explain.

I trust we shall hear no more of these ugly comparisons, for comparisons are always odious, yet under provocation and in self-defence, I have been compelled to drag in personalities, and perhaps for the controversy as it concerns independent physicians, it is just as well the opportunity was forced upon us by an official.

Yours, &c., W. C.

THE CAUSE OF THE LOCAL PROFESSION. TO JAMES R. WALLACE Esq., M.D., L.R.C.P. & S., L.S.A. Secretary, Indian Medical Association.

SIR AND CONFRERE,—*Apropos* of the distressing state of affairs as at present obtains with the Anglo-Indian and Indian community in India and of civil medical practitioners in particular, a correspondent suggests the desirability of sending a delegate to Europe to plead our cause. He is *right*, Sir, very right, as since DR. ERNEST HART's strictures on the I. M. S. a decided effort is being made by those who have "to receive more and to take away from those who have not the *little* that they have struggled hard to obtain," and inch by inch our prestige is being slowly but so surely wrested from us, that unless we make a determined stand for life and liberty, we shall soon be a mere cipher in the land we helped to build and keep for England's gain and glory.

Two main difficulties are presented :—(1) The expenses of the undertaking with its to and from journey and the money needed for the keep of the delegate for the four to six months that he will necessarily have to stay to gain the ear of the powers that be, and (2) who should or ought to go.

Those of us whom Providence has dealt kindly with are (no matter how willing they may be to do so) unable to plead, because having never worn the tight shoe they cannot feel how it pinches or tell where it really hurts. Those who have large practices or business firms have too many private interests to protect, to enable them to give this important subject and our actual grievances the undivided and unhampered attention they require. Some have never given the matter a second thought, because it did not just then directly affect them, and they dreaded to peer into the veil of the future, while others are not in a

position as fully explained. These men, however, are not content with the literary character of the situation or picture that their statements present, if malitiously not, sound and true, yet empty. All the few who thoroughly grasp the whole matter in all its bearings, both present and future, the majority unfortunately are unable to exert a representative speaking, because they have never mixed in public life, have no journalistic connections, and never having addressed a public assemblage through the press or in the future, they are consequently too retiring to write or speak in public, both of which require considerable nerve and practice.

Some one proposes a "Royal Commission of Enquiry," but as the late Opium, Leprosy, and Vaccination Commissions afford the firm conviction that no good will accrue to us, as everything, no matter how solemnly true, that militates against traditional conservatism will run the risk of rigid exclusion, and I scarce think it wise to trust ourselves and the future of our children to the "thousand against" to "one for us" chance of such a Commission, when our only remedy lies in agitation and straightforward, honest representation of matters as they really stand.

The position is a truly serious one, and with all due modesty, I beg to submit that springing as I do from a long list of journalists and public speakers (five generations in direct line) with a large press connection and having for years carefully studied these matters in every one of their aspects, I would be well fitted for this important mission, as besides being a medical man who has held Military, Civil and Municipal office, which have daily brought me in contact with all manners and conditions of men, I am a journalist and public speaker of several years' standing with a fairly large connection with the more important portion of the British lay and medical press.

Living as I have always done, and striving my level best for the public good, I have eschewed a "family practice" and any and every business that tying me down to any one place would force me to protect private interests and neglect the aims and ambitions of the Anglo-Indian community of which I am proud of being a blood-member.

Therefore, Sir, as there is absolutely nothing to detain me, and as I have nothing to distract my attention from agitating the British press and public for the alleviation and bettering of our condition I am free to start, as soon as the Indian Medical Association thinks fit to send me as its delegate, and am quite prepared to stay in England for as long a period as it requires me to, provided that I am furnished with the most moderate expenses for myself and family for such time as the I. M. A. wishes me to fight our cause.

More easy terms than these you cannot obtain, and while in your capacity as Secretary to our Association, I ask you to send this letter before the "Council" for consideration. I, in the public interest, claim the favor of your inserting my proposal in the Indian Medical Record, so that those of your subscribers who have not yet joined the Indian Medical Association may be so advised as early that we may

have in it a paper of considerable interest and value.

Yours, &c., **WILLIAM D. BARNES, M.D., F.R.C.S.**

Calcutta, 24 November 1901.

We believe Dr. Barnes to be not alone among the medical men of India who can express an opinion on the matter calmly and fairly. He has been elected to the Council of the Indian Medical Association. His impartiality and objectivity is evidenced by the fact that he has been elected to the Council of the Indian Medical Association who may be deemed to be impartial to large—B.D., I.M.A.

CIVIL APOTHECARY.

TO THE EDITOR, INDIAN MEDICAL RECORD.

SIR,—I trust you will extend your support to this branch of the Subordinate Medical Service as generously as you have done in the case of the Military and Civil Assistant Surgeons and Hospital Assistants.

The Civil Apothecary class was opened about 20 years ago to take the place of the Military Apothecaries at civil stations when the services of the latter were required for purely military purpose and they have invariably given good account of themselves in the various and responsible duties required of them. Now that the Military Apothecary has been given the decent and very appropriate designation of Assistant Surgeon, I think it would only be fair that the Civil man gets it also. But the mere title is not enough; it should be accompanied by an increase to his miserably poor salary. Why should not he be paid like the military brother, when he is on an equal footing with him in professional education, and is found to fill his place in civil life with entire satisfaction? Many of the Civil Apothecaries (nearly one-third of their present number) are holders of University degrees (L.M.S., &c.), and since the year 1888, the Service is recruited not as it was and as the military branch still is, by men educated at Government expense, but from private students who have taken the L.M.S. degree. But I believe it has been found difficult to get these men, as the present pay and position are not sufficiently attractive. The pay is a mere pittance, starting with Rs. 50 and rising after a life-time of service to Rs. 150 plus an allowance of Rs. 50 for an independent charge. This is barely sufficient for any honest man to live decently on, much more to enable him to purchase books and journals, so that he may keep himself abreast with the advancing times in professional knowledge.

The present Surgeon-General with the Government of Madras knows the Civil Apothecaries well, and is fully aware of their worth, as he was for a long time a professor of the Madras Medical College; and I have no doubt that he will make just proposals on their behalf when a proper opportunity occurs; and may that be in the near future.

Yours, &c., **CIVIL APOTHECARY, &c.**

SUSPICIOUS REMITTENT FEVER.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I have recently in my patients come across cases of "fever" which, in the first instance, is of a remittent type, but which, after a few days, changes to an intermittent type. I have described in the Record of the 1st March 1902, the

The patient of Bombay. I looked upon this case with interest, being that it was on the border land of, if not within the sphere, of typhoid, notwithstanding that I have heard of the doubts which exist as to the possibility of natives being affected with this much-debated disease. All the characteristic symptoms were to be observed here in more or less modified form, such as the persistent and high temperature in spite of every endeavor at reduction, including the wet pack, the frontal headache, the white furred tongue gradually and surely reddening at both tip and edges, only shortly after to pass again into the dry brown condition; the light yellow semi-solid stools, tympanitis and gurgling in right iliac fossa. Spots were looked for but not seen. Pains simulating hepatitis were present in liver, which with the fever was one of the early symptoms observed. This tenderness, however, did not last more than four days when, under the usual treatment, it subsided entirely. On about the 9th day of the fever he got acute pains in both knees, all the other joints remaining unaffected. The high temperature kept on, until the 16th day when he was, strictly against advice, removed from medical treatment by his father, with the object of being taken to his country. He died the same evening. In the words of Dr. RAM KISHEN where he says as regards typhoid in natives that "it affects the brain and liver, diarrhoea is often present, tongue is dark, dry and rough, and the eyes are sunken, and that, do whatever we may, the fever never leaves before its time is up." He conveys to us exactly the conditions I observed in the case above put forward. My two other cases of suspicious fever in natives occurred in people who were in the close vicinity of the first one, and soon after which they made their appearance. We had here the same persistent temperature in face of judicious endeavours at bringing about a reduction, and almost the same condition of the tongue and a sluggish liver, with a tendency to constipation. In the one the temperature fell to normal on the 8th morning, and in the other on the 7th. All three of these cases I recognised as remittent fever, the first, severe, and the two last, mild.

Yours, &c., A. BEALE,
In medical charge R. I. M. S. "Clive."

BOMBAY SUBORDINATE MEDICAL DEPARTMENT

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—I am glad to see that your correspondent "Sympathy" has realised the poor prospects of the 1894 batch of 3rd class Assistant-Surgeons. How long will the 1895 batch and those coming out of College hereafter have to wait for promotion? The officers of the A. M. S. and I. M. S. get promoted by length of service, also the Military Assistant Surgeons and the Civil Assistant Surgeons and Hospital Assistants in Madras and but with Military Assistant Surgeons of the Bombay service it is a case of jumping into dead man's shoes. Is this sad state of affairs to last for ever? Some years ago, a similar batch in promotion occurred in Madras, but when the matter was represented, the present ruling was brought into force, viz., promotion by length of service. I would ask why this privilege was not extended to the Military Assistant Surgeons of the Bombay service, who are in

every respect as well qualified as their counterparts in Madras. Surely what's good for the goose is good for the gander. When the unfortunate batch of 1891 came out of the Grant Medical College, there were about 100 3rd class Assistant Surgeons in place of 100, which is the number allowed, and to add to their misfortune a number of supernumeraries in the other grades had to be absorbed, hence the present block in promotion. At the present time there are eighteen, and the batch coming College will furnish at the very least eight, bringing up the total to twenty-six, which is more than twice the number allowed, with an increase every succeeding year. Can any one now wonder at the slow promotion? This is a long-standing grievance, and one that requires thorough investigation. The sooner this is done the better. It will remove the present discontent, and the work will be carried out more cheerfully.

Yours, &c., DISAPPOINTED.

MILK SUPPLY OF THE ARMY.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—In the 1st September issue of your paper, page 195, your correspondent, Mr. M. VERGHSE, under the head of "The Milk Supply of British Troops in India" was very eloquent over the woes of Tommy Atkins and the milk question. May I be allowed to inform him that Tommy Atkins is very much better looked after in this respect, at all events in hospital, than Mr. VERGHSE supposes, seeing that for some years we have supplied the Indian Government, expressly for use in the hospital, with large quantities of the "First Swiss" Brand of unsweetened condensed milk. Your correspondent must not scoff when he reads the words condensed milk, for the unsweetened milk is a very different thing from the well-known ordinary sweetened condensed milk. First it contains no sugar (added), then the presence in it of the murderous bacteria is an impossibility, because any disease germs that may by chance have found their way into the milk would be absolutely destroyed by the great heat used in the process of manufacture, then boiled water is used when mixing. Tommy has the purest, richest and best milk this world supplies, indeed far purer than if taken direct from the cow, the flavor also, unlike that of ordinary sweet condensed milk is unimpaired, nay it is enriched. Now these things being so, let Mr. VERGHSE be happy in the knowledge that "Lord Bull" is not after all so careless as to the well being and comfort of Tommy as many suppose.

Yours, &c., A. J. MARTIN.

PIGMENTATION.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Will any of your readers kindly inform me of any preparation for effacing or at least lightening the copper-colored pigmentations of secondaries, as I have a number of such cases in hospital at present, and they persist after continued applications of unguentum hydrargyri emulsionem?

Yours, &c., THOMAS VICTOR.

Have you tried the double chloride of gold and sodium in 41 grain doses morning and evening?—S. J. M. D.

LIQUOR EPISPASTICUS IN WARTS OF THE GENITALS.

To the Editor, "INDIAN MEDICAL RECORD."

Sir.—Perhaps it is not generally known that Liquor Epispasticus lightly painted over genital warts, say morning and evening, until they drop off, is a rapid and most effective method of getting rid of this filthy affection. The excoriation of superficial mucous membrane, which is liable to occur to some slight extent, however carefully this preparation be applied, can be healed up in a couple of days with simple dressing. Dealing with these cases in this manner does away with the painful process of snipping the fungus off with the scissors, often a not very easy task, as when we have the cauliflower excrescences to deal with, made up of all base and very short proliferations, the operation is, as a rule, accompanied by severe bleeding, after the suppression of which remedies such as nitrate of silver or nitric acid are applied with, in very many instances, a recurrence of the disease, not only on the old sites, but also on adjacent parts. This cantharidine line of treatment I first saw practised by Surgeon-Major C. A. WRESE, A. M. S., and the complete success with which I always found this procedure followed was remarkable. It has many advantages over the commoner remedies. It does away with the sense of fear of pain about to be inflicted when the scissors, nitrate of silver, &c., are proposed to the patient, there is no obstruction from this cause to its free application and the perfect eradication of the disorder; the pain if any, resulting from excoriation, is so transient that the subject never speaks of it; and the cure is permanent, with no fear of adjacent infection.

Of course great care must be taken in applying this remedy and to limit, as far as possible, its action to the warts themselves. A layer of dry lint over the solution after it has been coated on will protect surrounding parts.

Yours &c., A. B.

Government Medical Gazettes.*

GOVERNMENT OF INDIA.

Surgn.-Col. T. Maunsell, A.M.S., to offg. as P. M. O. Bengal Command from 15th Oct. 1895, *vice* Surgn. Maj.-Genl. T. Walsh on leave.

Surgn.-Capt. T. E. Swinton, I.M.S., to be personal Asst. to P. M. O. Bombay Command, from 1st Oct. 1895.

Surgn.-Capt. H. R. Woolbert, M.B., I. M. S., to revert to med. charge Deolali Irregular Force and Harrowtee and Tonk agencies on 1st Oct. 1895.

Third grade Hosp. Asst. Gagan Singh is permanently attached to the Burmah Civil. Dept. from 19th Sept 1895.

BENGAL GOVERNMENT.

Leave is sanctioned as under:—Surgn. Lieut.-Col. J. O'Brien, 5 days extension.

Surgn.-Capt. N. P. Sinha, for 10 months and 28 days from 18th Nov. 1895.

Dr. C. Banks for 5 weeks, from available date; Dr. J. L. Hendley, 11 days, from 21st March 1895 as permitted extension.

Asst. Surgn. N. P. Bann, 2 months extension; N. O. Banerjee, 6 months extension; A. L. Moosumdar, 8 months from available date.

The following officers are placed at the disposal of the Insp.-Genl. of Jails:—Surgn.-Capt. B. C. Oldham, and F. P. Maynard.

* Continued on 16th November.

The following appointments are made:—

Surgn.-Capt. E. Bird to be Civil Surgeon of Hyderabad.

Dr. N. O. Meekari to be civil med. Asst. at Secunderabad. Surgn. F. Mitter to med. charge Secunderabad Disp.

Medical charge was made over as under:—Asst. Surgn. K. N. Banerjee, of Dinapur Jail, on 26th Oct. 1895; and N. G. Mitter, of Arrah Jail, on 26th Oct. 1895.

Medical charge was assumed as under:—Surgn.-Lieut. Col. W. F. Murray, of Arrah Jail, on 26th Oct. 1895.

Surgn. Lieut. R. M. Blaker, of Dinapur Jail, on 26th Oct. 1895.

The following Civil Hosp. Assts. to have the higher grade pay from 21st Oct. 1895:—

Second Class.—Nishi Kanta Dass and Baroda Prosad.

Third class.—Syed Mahomed Abbas Shakur; Satish Chandra Acharye; Baidya Nath Giri; Lakshmi Narayan Mitter; Saroda Prosad Sen; Bhagawat Parshad.

PUNJAB GOVERNMENT.

The following acting appointments among Civil Surgns. are notified:—

Second Class.—Surgn. Maj. C. J. Bamber, from 26th Sept. 1895. Surgn.-Capt. D. T. Lane, from 5th Aug. 1895.

Power to conduct *post-mortems* in Dera Ghazi Khan Dist. is granted to the Hosp. Asst. attached for the time being to the Rojhan Disp.

Leave of absence is sanctioned as under:—First class Hosp. Asst. Daulat Ram, 15 days *p.l.* from 4th Sept. 1895.

Second class Hosp. Asst. Sobha Ram, 6 months on *p.a.* from 17th Oct. 1895.

Third class Hosp. Asst. Abdul Hamid Khan, 3 months from 26th Oct. 1895; Hira Singh, 15 days from 8th Oct. 1895; Ibrahim, 6 months' furlough from 12th November 1894.

The following assumed charge:—Bde.-Surgn. Lieut.-Col. W. A. C. Roe, of Insp.-Genl. Civil Hosp. Punjab, from 24th Oct. 1895. Surgns.-Maj.—J. W. Rodgers of civil med. duties, Dera Ghazi Khan Dist., from 9th Oct. 1895; M. O'Dwyer of civil med. duties, Jullunder Dist., on 16th Oct. 1895; Surgn.-Capt. H. Fooks of civil med. duties, Bannu Dist., on 16th Oct. 1895; Mily. Asst. Surgn. J. T. Weston, of Supdt. Hissar Jail, on 10th Oct. 1895; Asst. Surgn.—Khan Bahadur Chetan Shah of civil med. duties, Ludhiana Dist., on 18th Oct. 1895; Bhagat Ram of Sany Offr., Kalka, on 1st Oct. 1895; More Chand of Mooltan Dist. Jail on 27th Sept. 1895; Diwan Ali of Pindighat Disp. on 23rd Oct. 1895.

The following made over charge:—Bde.-Surgn. Lieut.-Col. B. Franklin of Insp.-Genl. Civil Hosps. Punjab on 4th Oct. 1895.

Surgns.-Maj.—M. O'Dwyer of Dy. Sany. Comr., Punjab, on 16th Oct. 1895; S. F. Bigger of Civil med. duties Banna Dist., on 16th Oct. 1895.

Surgn.-Capt.—D. M. Davison of civil med. duties, Gurdaspur Dist., on 18th Oct. 1895; H. Headley of Supdt. Dharamsala Jail on 25th Sept. 1895; E. N. Morris of Supdt. Mooltan Dist. Jail on 27th Sept. 1895.

Surgn.-Lieut.—E. A. R. Newman of civil med. duties Dehra Ghazi Khan Dist., on 9th Oct. 1895.

Asst. Surgn.—Brijal of civil med. duties Ludhiana Dist. on 19th Oct. 1895; Sobha Ram of civil med. duties, Jullunder Dist., on 16th Oct. 1895; Radha Kishan Rai Bahadur of civil med. duties, Gurdaspur Dist., on 18th Oct. 1895; Harbhagwan Das of Sany. Office, Kalka, on 1st Oct. 1895; Gobind Ram of Chisnot Disp. Jhang Dist., on 11th Oct. 1895; Fateh Chand of Supdt. Hissar Jail on 10th Oct. 1895; Gobind Ram of Mooltan Normal School on 12th August 1895; J. D. Bebelro of civil med. duties Sheikh Batin on 26th Oct. 1895.

BOMBAY GOVERNMENT.

From the 6th Nov. 1895, Surgn. Capt. J. Jackson, M.B., Supdt. Hyderabad Central Prison, is vested with the powers of a 3rd class Magistrate.

Surgn. Lieut.-Col. M. L. Bartholomew is nominated as a member of the Ambahabad Municipal Board.

The Deccan Gang was placed under the medical charge of Asst. Surgn. A. G. Baker on 18th Oct. 1895.

FORUM.—On the 23rd October, at Suva, C. P., the wife of Suva, Capt. F. J. W. Porter, M. B. N., of a daughter.

It is characteristic of conspiracy that it tends to spontaneous disruption. Whether we deal with great or small combinations of this kind, with the quasi-sublime or with the ridiculous in imposture, the result is the same. A quarrel or a bribe may at any time introduce the thin end of the wedge, and the further work of cleavage is only a question of time. It is usually to the public advantage when offenders, thus break with each other, and a degree of satisfaction on the part of outsiders is at such times only natural. Sometimes, however, this feeling is tempered by a touch of pity, as in a case recently examined in the Southport police-court. A youth eighteen years of age was charged with sleeping out of doors. He defended himself on the plea that his master, a professional hypnotist, had refused to pay him his wages. Some remarkable statements which follow throw a light on the kind of relations which exist between the hypnotist magician and his medium. According to his own admissions the sufferings of this unfortunate "subject" were not imaginary. The art of the master juggler did not extend to the abolition of sensation. A pretended trance in which he lay for three days with his mouth stitched up was to the boy a period of wakeful and doubtless of painful sensibility, and we may safely conclude that certain injuries inflicted upon him at other times were likewise unrelieved by the anaesthesia of suggestion. The folly of enduring—the morbid and culpable folly of encouraging—these miserable impostures ought to require no demonstration. Their exposure in this instance will, if it is to be hoped, have some influence in weaning the minds of a credulous public from the attraction of a species of fraud to which it is far too ready to expose itself. We will not deny the strict justice of leaving the knave and his willing dupes in cases of this kind to live on one another and to find each other out. Still, this admission does not absolve us, as humane beings, of a certain social responsibility in the matter. Where the effect of the imposture implies no great personal detriment it may be allowed to work its own cure. Where, on the other hand, persons like the youth above mentioned are comparatively incapable of self-defence and are liable to somewhat serious injury, it will be generally admitted that some form of official supervision, and even at times of interference, is called for.—*Leader*.

GENERAL ARTICLES

THE FUTURE—PAST AND PROSPECTIVE— OF MEDICAL AND SANITARY WORK IN INDIA.

Mr. Bagg, Surge. Lieut.-Col. Kenneth MacLeod.

M.A., M.D., LL.D., F.R.C.S., Edin.

Questions of medical reorganisation and sanitary development in India are at the present time undergoing keen discussion. There seems to be a general consent that some change is necessary and impending; but the grounds on which that change is needful and the manner in which reform is to be accomplished do not appear to be always clearly defined. Service considerations loom too large in the argument, and it is not sufficiently held in view that medical and sanitary administration must constitute a part of general administration; and that questions of reorganisation must turn upon the condition and requirements of the country, and not upon the history or qualities or rights of present establishments, or the claims and qualifications of those who clamour to replace them. A review of the evolution of general and medical administration in the past is necessary in order to understand clearly the faults of the present and needs of the future in respect of medical and sanitary work.

For this purpose I have drawn up a table in which the more prominent features of the history and administration of India, since the granting of a charter to the East India Company in the year 1600 up to the present time, are stated on one side, and the consequent changes which have taken place in the strength and constitution of the medical services are shown on the other.

Scheme of Administrative and Medical Evolution in India.

Historical.

Seventeenth Century. Factories; writers, native agents and subordinates; ships; a few soldiers.

Eighteenth Century. Acquisition of territory by coasts and conquests; wars; armies, white and black; navy. Civil administration, by presidencies and districts, of acquired country; collectorate course of justice, police. Police established, and subordinate, revenue, judicial and clerical services organized.

First Half of Nineteenth Century. Extension of territory; increase of army and navy; subordination of new provinces; control of civil governments multiplied; provincial administrations created; considerable attention paid to education and medical relief; peace, protection, and commerce extending.

1857. The Indian Mutiny. Motives, organization; of military establishments and civil government; suppression of mutiny; organization of Maratha army; reorganized police administration.

1858-60. The British East India Company dissolved, and government of India passed to the Queen.

From Administrative position in Government. Transfer of Government from the Company to the Queen.

Administrative, military and civil. Main features in general history of the Government of India from 1858 to 1900; last thirty years of the Government of India.

1858-63. Indian Medical Service created; civil medical service largely entrusted to trained Indians and "Europeans." Increase of subordinate and subordinated medical services.

1860. Indian Medical Service reformed. Officers restricted to charge of native army and civil employ.

1861. Administration of British Army hospitals and medical staff entrusted to British Medical Officers.

Introduction

Manifestation of great sickness and mortality among soldiers, prisoners and population. Depreciable sanitary condition of country becomes evident.

1873. Lord Mayo's policy of decentralization gives increased responsibility and power to local Governments. Considerable increase of activity in medical and sanitary matters follows.

Efficiency of separating military and civil medical administration fully realized. Programs in public medical relief, medical education, sanitation, vaccination, and vital statistics continues.

1882. Lord Ripon's scheme of local self-government elaborated. Municipalities and local bodies created and entrusted by law with power of collecting and spending money for local purposes—medical relief and sanitation among them.

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1967, CIVIL RIGHTS, and
 organized. For example, the
 against their own interests.

1966 Kentucky Constitution
with the Government of the
United States.

The "Frodoth" Society has
announced that. Overcoming
friction between medical and nursing
departments and between hospital
and municipal medical departments.

Previous arrangements into medical and military matters were left there were made, and some interposition of military medical departments.

1905. Military medical administration unified, separated from civil and placed under one head. Civil and military institutions re-organized and placed under control of provincial governments. Licenses and graduates of Indian medical schools ending in practice in territories and states.

Local bodies suggest and found hospitals and dispensaries, and employ medical subordinates for medical and sanitary purposes. Great increase of sanitary work, and closer attention to health matters in general.

From this bird's-eye view of Indian administration, it is evident that our Government of the Empire has been pervaded by several well-defined principles, chiefly (1) Military unification; (2) separation of civil from military administration; (3) decentralisation of civil government; and (4) development of local self-government. It is on these lines that progress will proceed in the future, and any change which is considered necessary in the interests of the country ought to take the shape of gradual development rather than abrupt revolution.

The recent creation of four army corps under one chief is another step towards consolidation of the military forces of India. Probably a higher degree of assimilation of the native to the European section of the army will result in the course of time; and the question of amalgamating and unifying the Army Medical Executive, medical administration having already been amalgamated and unified, will eventually arise. Meantime the differences of constitution and location of the two sections of the Army, and the different conditions under which the medical executive of each are engaged, will probably militate against consolidation of the latter.

Military and civil medical administration have been completely separated since the year 1880 and the system then commenced has worked well. No complaint has arisen from the Governments under which they have acted of inefficiency or neglect on the part of that section of the Indian Medical Service which is employed under civil administrations. On the contrary, it is allowed that the work has hitherto been done well, and that officers of the Indian Medical Department have rendered splendid services in war and peace—in medical relief, sanitation, vaccination, education, the management of prisons and asylums, and in many other capacities. It is true that they are primarily recruited for military service, are trained in the Army Medical School at Netley, have to serve two years with the colours and are liable to recall from civil employ in case of military exigency. As a matter of fact, this recall has seldom taken place since the 1880's, and as a matter of experience, these officers are doing the work—rather the better as regards status and remuneration—for their military

training. It was once the fashion to disparage military medical work—it consists after all in treating the sick and wounded and improving the sanitation of barracks, lines, cantonments, and camps. In India it is frequently confused with civil work. The work is by no means petty nor the men incompetent, and the reduction of the death-rate of the European army from 69 to 12 per 1,000 is no mean achievement.

Equally anachronistic is the phrase "fossil seniors." Administrative officers in these days are the survival of the fittest, and are carefully selected both at home and abroad. That the liability to recall to military duty has not damaged the work of civil surgeons in India is quite certain. Whether the policy of maintaining in this manner a reserve of medical officers for military contingencies is expedient and sound or otherwise must depend on administrative considerations; especially on the question, how far the contingency of military exigency on a large scale can be banished from Indian thought. The recent cry for a purely civil service has arisen from an interested class which hopes to profit by the change, and not from those who rule the country and administer its military and civil affairs.

Even if it were decided to be advisable on administrative grounds, to entertain a purely civil medical service, it would be necessary to obtain the same class of men as at present and in a similar way. The primary duty of civil medical officers is to attend on Government officials and their families, and take charge of Government institutions, Europeans, or Europeanised persons, are obviously best fitted for these purposes, and the universal rule in India that all official departments must, for efficiency and progress, be officered in chief by Europeans cannot with impunity be set aside in the case of the medical and sanitary services. Plenty of employment has arisen, and more will arise, as the country develops, for Indians, educated in India, without destroying arrangements which have hitherto worked so well.

The real cause of dissatisfaction with medical and sanitary services in India, as now constituted is that disease and death are yearly ravaging the country; that sanitation is in a very backward state, and that these services are feeble in the face of conditions, making for deterioration of health and destruction of life throughout a vast area covered by an immense population. What are a few hundred doctors and a few score sanitarians to the 280 millions of India? All this is quite true; but does the remedy lie in multiplying and debasing the medical and sanitary executive, and is it the duty of Government to carry medical relief to every door and compass the cleansing of every home?

The remedy consists rather in following out the lines of policy—decentralisation, and self-government—already initiated, and developing the spirit and practice of self-help and self-support among the people. This has been already done largely as regards medical relief, but it is even more necessary in matters of sanitation. Medical relief requires a skilled agency, but the work of cleansing, which ought to commence with the home, can and must be wrought by the people themselves.

It is absurd to contemplate an army of sanitarians and

scavengers sweeping the Indian Empire. The head of the home must be held responsible for the cleanliness of the household, the urban authority of the town, and the district and provincial authorities for the execution of important works necessary for the health of the community at large. The duty of Government consists in showing why and how sanitary measures are to be undertaken. By means of advisers and inspectors the sanitary needs of the country and community are ascertained, and this done, the ruling power sought to insist on the proper steps being taken by the local authority to secure cleanliness and prevent practices dangerous to health. The present advising and inspecting agency requires strengthening and organising, and arrangements have to be made for the scientific study of disease causes.

But sanitary progress must depend on sanitation becoming part and parcel of the rule of the country and life of the people as in England. As development proceeds in this direction there will be abundance of employment for Indian medical men.

I have in these remarks designedly limited myself to principles, and avoided comment on particular proposals and plans of medical re-organisation.

The points which I have endeavoured to establish may be summarised in these three propositions:—

1. The sanitary defects and defaults of India do not result from any ignorance or incapacity on the part of the Indian Medical Service, but depend upon the circumstances and habits of a teeming and ignorant population spread over a vast extent of unhealthy country.
2. The arrangements for medical aid to Government servants and medical charge of Government institutions and for medical administration are satisfactory; but the arrangements for supplying the sanitary requirements of India are rudimentary and ineffective.
3. Sanitary reform and progress can be accomplished only by educating, persuading, and empowering the people to adopt measures conducive to health as a detail of domestic and communal life. To that end the State requires an organised establishment, acting under the orders of imperial, provincial, and district authorities to investigate, report, and advise.

PERSONAL HYGIENE.

By S. J. MULLEN, C.M.S.

Srielliputr.

(Continued from page 344, Vol. IX.)

JUST the same as with breathing and the beating of the heart, every step we take and every word we speak wears out or wastes a small portion of our bodies, and this waste is replenished by the food we eat, and which answers several purposes. It also warms us, producing animal heat of which as much is every day generated as would boil a large pot of water; but as the normal heat of our blood is 98.4°F., anything above this must be called fever. Our food gives us strength to perform the various functions of life and thus serves somewhat the same purpose in our bodies as wood or coal does in the railway engine.

Kind of food.—The food of man varies greatly both in different countries and in different seasons in the same

country. Thus in the northern regions, where vegetables will not grow, the natives live entirely on animal food. Many Hindus are pure vegetarians, while others live on a mixed diet.

Composition of food.—Food stuffs are divided into three great classes: the (1) minerals; (2) vegetable; and (3) animal. The mineral includes water, salts, lime and phosphorus, which go to form bones, iron which gives the red color to the blood, and other substances. A few of the animal and vegetable foods may also be divided into three principal kinds: (1) flesh-forming; (2) heat; and (3) strength-giving food. Flesh-forming food contains a large quantity of nitrogen, is spoken of as *nitrogenous food*. Thus pulses, such as peas, dal and gram, contain the largest proportion of flesh-forming food, and more than double that obtained from millet and maize, while rice contains the least out of all the grains. Many a cooly wishing to live like a rich man on rice and ghee, forgets that the raggi, cumboo, cholam, &c., that he was brought up on is much more strengthening. Flesh and fish contain about four times as much flesh-forming food as rice. Non-nitrogenous food stuffs may be sub-divided into three principal classes: (1) fats and oils; (2) sugar; and (3) starch. Rice is composed chiefly of starch, which arrow-root also contains in a purer form. These classes of food are necessary for the body, but they are hurtful if taken solely or in excess. Milk supplies every need for the young in the way of food, as it is the only single article which is sufficient for this purpose; but is unfit to be the sole food of the adult.

The conditions essential to the hygienic suitability of food are: (1) that it should contain all the elementary substances which the body itself includes; (2) that these should be combined into certain form and proportions which experience has shown to be necessary to efficient nutrition; (3) that the total quantity consumed should be sufficient for the wants of the body according to varying circumstances of exertion, climate, &c.; (4) that the classes into which science and experience have taught us to divide aliments should be present in certain definite proportions to each other; (5) that the articles of food should be of such nature as to be suited to the digestive powers of the man or other animal to be fed, and (6) that the food or its mode of administration and preparation, or all combined, should be varied so as to ensure sufficient ingestion and efficient assimilation.

What to eat and avoid.—The poor often eat anything or everything they can afford to get, but many people have some chance in the choice of what they may eat and while a variety of food is best, great care is necessary in its choice as the stomach is the gateway to many diseases, and our food should therefore contain a sufficient proportion of flesh-forming substances. Special care is needed about milk which is very liable to contamination. In Madras milk men sometimes mix sewage water with milk, and to this mixing, very bad fevers as typhoid or enteric fevers have been distinctly traced. Persons who use ghee and sweetmeats in large quantities grow fat and unable to work. They become grey-headed in early manhood and suffer from many diseases. Green vegetables are useful, not so much for their nutritious elements as for the salts

they contain; but they should be well boiled before eaten. Sailors without fresh vegetables are liable to a disease called scurvy. Fruit properly ripe are excellent for dietetic purposes, but if unripe or over-ripe, they are hurtful. The best time to eat fruit is at breakfast or at tiffin. Decayed food of any kind ought to be rejected. Double care is necessary about food when cholera or dysentery prevails, as what may do no harm at other times may then cause sickness and death. Raw fruits and vegetables in large quantities, and all indigestible food, should be avoided. Spices, &c., are useful in moderation, but in excess they injure the stomach. Badly cooked food is unwholesome. People are sometimes made ill through the poison of lead or copper in cooking vessels which should be kept scrupulously clean, and care taken that they are properly tinned from time to time. Food must be regulated partly by the constitution. The English proverb "one man's meat is another man's poison," tells us that food must be regulated by constitutions and idiosyncrasies.

How to eat.—When a woman is boiling rice, she puts the whole of it into the pot at once and at the same time, but if she kept throwing in rice now and then, it would be badly cooked. Just so with our food, which we should eat at fixed hours only, so that the stomach may have time to properly digest one meal before another is taken. The bad habit of giving food to children very frequently should be discontinued, as the majority of the diseases of children is due to over-feeding. Digestion generally takes from 3 to 5 hours. Some articles are digested much more quickly than others. Rice usually takes about one hour, mutton 3 hours, eggs $3\frac{1}{2}$, fowls 4, beans, dal and potatoes $2\frac{1}{2}$, and cabbage 4 hours. Food, especially if hard or tough, should be well chewed or masticated before it is swallowed. The Ex-Premier, Mr. GLADSTONE, was in the habit of giving 32 bites or crumpets to every bit of meat before he finally swallowed it, and used to advise his children to give meat as many bites as they had teeth in their heads. The food is thus mixed with the saliva which has certain properties that help digestion and make the food more nourishing. Water should be only sparingly taken during meals, as too much water dilutes the gastric and intestinal juices, while too little of it interferes with the peristaltic movement of the stomach and thus impedes digestion. Some food taken before going out of a morning strengthens the body and helps to keep off infection, yet some people will persist in going out in the morning with an empty stomach and thus exposing themselves to the risks of fever or cholera. A good warm meal should be taken at noon. Some children attend school situated at at too great a distance to let them come home for meals, they should have a hearty breakfast before they start out. It is very hurtful to be obliged to work on an empty stomach. Children with sufficient food will get on better in their studies. Every school child should have some tiffin and a little food as soon as he or she comes home from school. A good meal should be taken in the evening about 7 o'clock, but eating late at night ought to be avoided. It is good to rest a little after a full meal. Perhaps, more people in the world die from eating too much than from having too little food. The rich often

not to exert. The labor, who are generally undisciplined sometimes injure themselves by overeating when they have the opportunity. We should never burden the stomach. An average adult at average work requires from 10 to 12 lbs. of his own weight of food, including drink in every 24 hours, 8½ ounces of albuminates whether meat or fish, 2½ ounces of fat, including ghee and oil; 14 ounces of starch, including sugar and rice, 1 ounce of salt, including common salt, and those of fruits, and 80 to 100 ounces of water, including coffee and tea; are required for an adult of ordinary laboring capacity.

(To be continued.)

NEW OPERATION FOR CATARACT AT THE CIVIL HOSPITAL, AMRITSAR.*

By RAI BAHADUR, MEHER CHAND, L.M.S.

Amritsar.

THE method described in this paper was first adopted by Dr. MULSONET, of Amritsar, in 1890, and has been followed by me with some slight additions in a very large number of cases.

The operation consists in the removal of the entire lens in its capsule by the manipulation and by lower section, without iridectomy.

The eye having been cocaineised with 4 per cent. solution and washed with 1 in 2,000 parts of corrosive sublimate lotion, the spring speculum is introduced, but not fixed.

The incision in the right eye is performed by standing behind the head, and that in the left eye is done by standing in front, and on the same side of the patient. The incision is made by introducing the point of the linear knife into the corneo-sclerotic junction on the outer side of the globe, on a level with the lower margin of the undilated pupil, the counter-opening being made a little lower on the inner side, and then the incision is completed in the usual way through the cornea.

Pressure is now applied with a flat scoop, or a strabismus hook at the upper border of the cornea, till the edge of the lens presents itself into the incision; by this process the iris, which is often in the way, recedes, and the lens gradually projects, and when nearly half of it is out of the wound, the pressure is withdrawn and the speculum removed. After this, the pressure with the thumb is re-applied to the globe through the upper lid, and counter-pressure applied to the ball of the eye below the wound on the sclerotic coat, with a scoop; the pressure now is very gently and carefully regulated, till two-thirds of the lens come out of the wound. Pressure is now again removed, and the patient is directed to close the eye, and looked towards his feet, when in most of the cases the lens slips out, the iris contracts, the edges of the wound become adjusted, and escape of vitreous is prevented. In cases where expulsion of the lens is retarded, it is completed by the aid of a scoop or a pair of iris forceps.

In those cases where the soft cortical substance of the lens comes out, but a hard nucleus remains behind, the capsule is very liable to rupture, unless tact and patience are exercised, the nucleus also protrudes.

Efficient extraction of the lens, is not of course without risk, which, however, is not so extensive as the old method, which should be cut off by a pair of scissors, instead of wiping it off; a slight escape of vitreous which occasionally occurs is of no consequence, so far as the result is concerned, the patient invariably having good sight.

About 3,400 operations have been performed by this method in the Civil Hospital, Amritsar, out of which nearly one-third was performed by myself.

Removal of entire lens in its capsule, by manipulation by lower segment section, without iridectomy.—The advantages of the lower operation as compared with the upper, are—

1st.—It is easier to do.

2nd.—Spasm of the superior rectus, which invariably results whenever the eye is touched, cannot interfere with the completion of the incision when once the operation is commenced, and also can be disregarded when pressure is applied to remove the lens.

3rd.—Less risk of escape of vitreous, as the lower part of the eye is more exposed to view and more easily manipulated by pressure during the extraction of the lens.

4th.—Spasm of the superior rectus in the upper operation tends to gape the edges of the incision, and so increases risk of escape of vitreous at the time of operation and later on, and, by delaying union, increases the risk of sloughing of the cornea. In the lower operation, no amount of spasm of the superior rectus will cause gaping of the incision, as the incision is at the further end of a segment of another circle, by which I mean the superior rectus being inserted into the sclerotic can act only on that segment of the circle formed by the sclerotic, and only to a slight extent on the neighbouring portion of the segment of the second circle (cornea), and the further removed the incision in the segment of the second circle is, the less the traction, and consequently the less the gaping. We know the eye consists of two segments of different circles, the sclerotic and the cornea. The superior rectus will tend to gape an incision placed anywhere between its ocular attachment and the sclero-corneal junction in front of it; but if the incision be in the cornea itself, the cornea being a segment of another circle, the incision will gape much less than if the cornea were the segment of the same circle, as the sclerotic, and the more we move the incision towards the meridian of the corneal circle, the less the gaping, and once we pass the meridian no gaping can occur. Further, whether the eye is inflamed or over-sensitive, as after an operation it is invariably turned upwards under the upper lid, and we know the upper is very much stronger than the lower lid, and any attempt to press the upper lid upwards with the fingers so as to open the eye cannot be done without pressing on the eyeball. It follows then, that to inspect the incision after an upper operation is far more difficult, and of times positively dangerous, from the pressure used, than when the lower operation is done, in which slight pressure on the lower lid against the malar bone is sufficient to expose the incision.

The advantages of not doing an iridectomy are—

1st.—No instrument is passed into the interior chamber except the linear knife in making the segment incision.

* Being a subject introduced before the Indian Medical Congress and read by the author at the session.

1st.—The iris is not injured, hence there is less chance of subsequent iritis, and consequently less risk of inflammatory action extending to neighbouring structures and endangering the eye.

2nd.—A clear circular mobile pupil, instead of a large gaping irregular pupil, which is not only unsightly, but seriously interferes with clear definite vision.

The advantages of removing the lens entire in its capsule are:—

1st.—It minimizes the changes of iritis supervening, as there are no tags of torn capsule or particles of lens cortical substances present to set up irritation. I find iritis extremely rare, since I commenced removing the cataract in its capsule whereas it frequently results when the lens is removed and the capsule retained, as in the usual operation.

2nd.—There is no necessity for a secondary operation to remove opaque capsule.

3rd.—I have repeatedly seen patients come to the hospital, months after a cataract operation had been performed, in which the lens was removed by opening the capsule by means of a cystotome, complain of blurred vision amounting to marked astigmatism in some cases. The pupil in some cases is clear, the cornea clear and even, and the line of incision almost invisible. If the eye be examined by the direct ophthalmoscopic method, the capsule will be seen, although perfectly transparent, wrinkled into folds. In such cases tearing the capsule across with a needle invariably gives good vision. This wrinkling into folds of a transparent capsule is best seen in those cases in which the capsule is opened by the point of the linear knife when traversing the anterior chamber in making the corneal incision. If the capsule is retained *in situ*, and remains transparent, which can only occur if its attachment to the suspensory ligaments, from which it derives its nourishment, is not destroyed, then it must wrinkle into folds when the eye recovers after the operation, for being non-elastic and not having the support of the lens substance, there is nothing to prevent it from forming folds. Now, this cannot occur when the lens is removed entire in its capsule, and I find, as a matter of fact, that the vision in such cases is clearer and more defined than when the capsule is left behind.

4th.—You can operate on an immature cataract without running the risk of setting up iritis or having to do a second operation, to remove opaque cortical matter and capsule, the objections to operating on an immature cataract. The disadvantages are:—

1st.—Greater skill and more delicate manipulation required, which cannot be acquired by all, and only after much patient practice by some.

2nd.—It is a more difficult operation.

3rd.—Risk of vitreous escaping by misdirected, excessive or unequal pressure during manipulation.

4th.—A slightly larger incision.

5th.—The capsule sometimes bursts when the lens is on the point of escaping, and as in such cases the attachment of the capsule to the suspensory ligament is destroyed, and its source of nourishment cut off, it left behind, it invariably turns opaque and requires subsequent removal. So, if this accident occurs, I always endeavour

to remove the capsule with iris forceps, even at the expense of a slight escape of vitreous; and should it occur, I can generally remove it within the first two or three days after the operation; for I find it better to open the wound and remove it early rather than wait, for its presence invariably sets up iritis and endangers the eye. I am fully convinced the capsule can never undergo complete absorption; it may shrivel up and fall behind the iris so as to be out of the axis of vision, but being fibrous in structure, it can never be completely absorbed. In some cases, at the time of operation, it falls behind the upper part of the iris out of view, and if I fail to grasp and remove it after two or three attempts I leave it, and on the second day after operation I most invariably find it opaque, filling the pupil and easy to remove. I never dilate the pupil with atropine before the operation, as I find by having an active pupil, although there may be a risk of bruising the circular fibres of the iris by the passage of the cataract through the pupil, there is less chance of a bead of vitreous following the cataract, since the iris at once retracts within the anterior chamber as soon the cataract escapes; whereas should the pupil be dilated with atropine it remains prolapsed after the escape of the cataract, and has to be returned into the anterior chamber by a curette or scoop.

A 4 per cent. solution of hydrochlorate of cocaine is instilled three times into the eye, once 10 minutes before the operation, again 5 minutes before, and the third time just before the operation is commenced. After the operation a layer of damp lint soaked in fresh yellow wash is applied, and both eyes fixed with a light muslin bandage without any pad. On the third day the lint and bandage are removed and reapplied, and so on for four days, after which the bandage is discontinued, the pupil dilated with atropine, and a layer of damp lint worn as a screw in front of the eye.

In those cases in which the capsule has burst and is retained, I instil a drop or two of liquor atropine after the operation.

No antiseptics, excepting fresh yellow wash, are used. The eye is washed with boiled distilled water and dressed with yellow wash, and the instruments washed, after each operation, in boiling distilled water.

Generally on the eleventh day the patient is well enough to go out. All are supplied with cataract spectacles before discharge, +11D for distance and +4D for reading, suit the majority of such patients. Poorer patients are given spectacles gratis, and those able to pay can purchase them from the stock in the hospital.

Eight hundred and twenty-four cataract operations were performed in 1892 and 1,145 during 1893 by the new method, and in the current year up to the end of November 1894, 755 operations have been performed, out of which 677 were successful (or about 90 per cent.)

METEOROLOGY.

By R. P. BANERJEE, B.A., G.B.M.S.L.

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(Continued from Vol. VII, page 329).

If a number of bodies heated to different degrees are placed together, it will be found that while those that are the most heated will lose a certain amount of heat (the

their temperature will "fall" those that were the least heated will gain more heat (or rise in temperature), and this rise and fall will continue until all the bodies placed together acquire the same degree of heat, i.e., become of the same temperature.

Heat affects all bodies in some degree or another, and without heat no living thing can exist, nor movement of any sort occur; but though of all chemical forces heat is the most important, still all that meteorology is concerned in is the part it plays on air, watery vapour, mercury and glass; the first three on account of the important place they take in the economy of Nature, and the two latter because most of the instruments are made of, or mounted in, glass and filled with mercury.

Heat however, acts differently on different bodies; thus solids expand cubically or superficially, and are slowest affected, liquids are sooner acted upon and expand in a linear direction; while gases, which are the most easily affected, expand in volume.

Thermometers are instruments for registering and recording the variations of temperatures in solid, liquid and gaseous bodies. Their ordinary form consists of a capillary-bore glass tube, sealed at its upper end, and at the lower extremity provided with a glass bulb filled with mercury or any other liquid, such as alcohol, ether, &c., that is very sensitive to thermal fluctuations. The instrument is graduated by first placing the bulb in melting ice and making a mark which afterwards becomes the zero of the scale. A similar process is enacted by putting the bulb into boiling water to obtain the boiling point, and the space between these two points is divided into an equal number of spaces, each of which is termed a degree, and is further sub-divided into fifths or tenths of a degree. There are three scales in use:—

(a). The *Fahrenheit*, which is in general use for clinical and ordinary purposes and is the English standard of calculation, has its freezing point marked at 32° and its boiling point at 212°. It is divided into 180 degrees, which are further sub-divided into fifths of a degree.

(b). The *Celsius* or *Centigrade* scale, which is graduated from 0° to 100° is divided into 100 degrees and is employed for scientific purposes, and wherever extreme accuracy is desired.

(c). The *Reaumur* scale running for 0° to 80°, though at one time largely referred to, is now seldom used by any one outside of Russia or her dependencies.

In computing calculations or comparing results of various observers, it becomes necessary to bring thermal indications down to the standard of observations, and for this purpose the sub-joined formulae will be invaluable:—

$$\text{Celsius} = (F - 32) \times \frac{5}{9} \text{ or } \frac{5}{9} F \text{ or } R \times 1.25.$$

$$\text{Fahrenheit} = \frac{9}{5} C \times 32 \text{ or } (C \times 1.8) + 32 \text{ or } \frac{9}{5} R \times 32 \text{ or } (R \times 2.25) + 32.$$

$$\text{Reaumur} = \frac{4}{5} (F - 32) \text{ or } \frac{4}{5} C \text{ or } C \times 0.8.$$

There are two ways of reading the thermometer (a). The ordinary method of merely noting the degree on the scale at which the mercurial column remains stationary.

(b) The actual reading in which allowance has to be made for the heat effects on the tube and the contained mercury by adding or deducting, as the case may be, the factor

value for each centigrade degree and the formula becomes $L = \frac{a}{c}$, where L denotes actual length of a degree on the scale; a , the apparent expansion of one degree centigrade; c , the capacity of the bulb and of that portion of the tube below zero and s the sectional area of the tube. Therefore the actual reading above 0°C would be the simple reading minus the factor of expansion for that degree.

Precautions.—(1) Always read to the nearest tenth of a degree. (2) Read quickly and stand as far from the thermometer as is possible, because actual breathing on the tube or radiation of heat from the approaching body are bound to effect the correctness of the readings. (3) Keep the eyes on a level with the top of the mercurial column; because obliquity of vision gives erroneous readings.

Maximum Thermometers, of which there are many shapes and sizes, are merely modified forms of the ordinary thermometer in which the mercurial column is interrupted by an air bulb and the instrument placed in a horizontal position, so that the detached mercury remains at the highest point reached before the remainder of the column recedes. The remote end of this index indicates the degree of heat attained. In some thermometers this index is made of porcelain, and being pushed forward by the expanding mercury is left behind as the latter contracts. After each reading give the thermometer a gentle shake, or two, so as to bring the index down and put it in contact with the mercury in the bulb.

In *Minimum thermometers* the mercury is replaced by spirit of wine, inside which floats a steel index which falls as the spirit contracts and thus records the lowest temperature observed; but when the spirit expands it is too light to float the index, which remains stationary while the spirit proceeds past it. To set the instrument incline the stem till the index falls to the end of the spirit column and replace the thermometer.

Hygrometers are instruments to measure the humidity of the atmosphere, and though for special cases special instruments are devised, still for common use the ordinary maximum and minimum thermometers answer the purpose well enough when their bulbs are covered with a piece of muslin that is moistened with water and not allowed to get dry.

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THE GOVERNMENT CINCHONA ENTERPRISE IN SIKKIM.

By G. KING, M.B., LL.D., F.R.S., C.I.E., BARRISTER-AT-LAW.
LIEUT.-COL., I. M. S.

FROM its first introduction to Europe in 1689 by the Countess of Chinchon and her father-confessor down to the year 1820, cinchona-bark used to be administered either in the form of powder or as tincture, infusion or decoction. In 1820 PELLETIER and CAVENTOU separated from the bark the alkaloids, which they named quinine and cinchonine. Quinidine was discovered by HENRY and DELONDRE in 1838, cinchonidine by WINKLER in 1847, and quinamine and aricine found at still later dates. Soon after the separation of the two alkaloids first mentioned, it was found that, in medical practice, far better results were obtained from

*Being a paper read before the Indian Medical Congress and sent to the Record for publication.

there was then from the exhibition of any of the pharmaceutical preparations of bark hitherto employed. What was called quinine in these early days was, no doubt, a mixture of all the alkaloïds contained in the bark used in its manufacture. The new drug was admitted into the Pharmacopœia under the name of quinine, and it is only in comparatively recent times that the other alkaloïds were even mentioned in the Pharmacopœia far less admitted as official.

The medicinal cinchona trees are all natives of the great forests of the Andes of South America. As the consumption of their barks extended in Europe, the trees in the Andes gradually began to disappear, the bark-cutters leaving year by year to explore forests more and more remote from the coast, and no system of conservancy was ever enforced by the various Governments in whose territories the trees occur. The result of all this was that the price of cinchona-bark steadily increased, and as the demand for it also increased, serious fears began to be entertained of the complete extinction of cinchona in its home in South America. The Government of India have, for many years, been the largest consumers of febrifuges in the world; and the Dutch Government were also, by reason of their Malayan possessions, much interested in the bark trade. These Governments were accordingly the first to take any action to avert the impending calamity. The suggestion to introduce the medicinal cinchonas to the hill ranges of British India was first made in the year 1835 (i.e. fifty-nine years ago) by Dr. FORBES ROYLE, a Member of the Indian Medical Service. Dr. ROYLE was at that time Superintendent of the Hon'ble Company's Garden at Saharanpur. In the years 1847, 1853 and 1856, Dr. ROYLE repeated his suggestions, but no action was taken upon them. In 1850 Dr. GRANT, then the Hon'ble Company's Apothecary-General in Calcutta, took the matter up, but without result. In 1851 Dr. FALCONER, who was the Superintendent of the Calcutta Botanical Gardens, again brought it forward; but also ineffectually. Dr. FALCONER's successors at the Botanic Garden, Dr. T. THOMPSON and Dr. T. ANDERSON, also both successively pressed it on the attention of Government and in 1858 active measures were at last taken which resulted in the establishment in 1861 of cinchona plantations in the Nilgiri Hills and in British Sikkim, near Darjeeling. A little before this the Dutch Government had also begun plantations in Java. As soon as the trees thus established in British India began to yield seed, that seed was freely distributed to all applicants, with the result that, before many years had elapsed, not only had the Government plantations been greatly increased, but thousands of acres in the hill ranges of Southern India and in the uplands of Ceylon had been covered with cinchona trees by the enterprise and energy of private planters.

Soon after their plantations began to yield bark in sufficient quantity, the Government set about discovering the best mode of utilising it. The first bark to be dealt with was red bark, the produce of *Cinchona succubra*. This species had proved much more easy of propagation and a much faster grower than the species which are *per excellence*, quinine-barks. Red bark, although rich in

its yield of total alkaloïds, is not proportionately rich in quinine, and is never chosen as a bark from which to manufacture that drug. With the view of making the most of the red bark of which they had become possessed, Government appointed a commission of medical officers to test the respective values as febrifuges of the alkaloïds which are found in *succubra* bark. The result of these experiments was to prove that, while quinine is the best febrifuge, cinchonidine and cinchonine have also much value. Government therefore resolved on the issue of a preparation which should contain all the alkaloïds of red bark in the exact proportion in which they naturally occur in it. The preparation which resulted is the well-known cinchona-febrifuge. When this preparation was subjected to analysis, it was proved to contain, besides the three crystallizable alkaloïds just named, an uncrystallizable alkaloïd, the existence of which in cinchona-bark had not previously been suspected. This alkaloïd still remains without any other name than the *amorphous alkaloïd*. It is a far more powerful febrifuge than quinine, a quarter of a grain of it being a sufficient dose for an adult. But it possesses depressing and nauseating properties which prevent its use in an uncombined form as a medicine. There is no doubt, however, that it is the presence, in small proportion, of this alkaloïd in cinchona febrifuge which makes that drug a remedy for fever equally powerful with quinine, although rather more unpleasant. When cinchona febrifuge was first issued for use in Government hospitals and dispensaries, it was subjected to much hostile criticism, the value of some of which is well illustrated by two examples:—One medical officer, whose report I perused, declared against the use of the drug, because he said he had found it inert; and, if I remember rightly, he declared that he would as soon treat his fever patients with wheaton flour as with cinchona febrifuge. Another officer, whose report I also read, excused himself from using or recommending others to use the drug on the ground that it is an *active poison*. I cannot myself offer any experimental evidence as to the value of cinchona febrifuge. The question has long ago been practically settled in favor of the drug, and the controversy need not be re-opened. Moreover, it is still being bought by private persons who are under no sort of compulsion to use it.

Cinchona febrifuge was first begun to be made in the Sikkim plantation during the official year 1874-75, but during that year only 48 pounds of it were issued to Government hospitals. During the year 1875-76, 1,940 pounds of it were given out; and its consumption increased so materially that, up to the end of the year 1887-88, no less than 87,704 pounds of it had been issued from the factory at Mungpoo. The whole of this large quantity was issued and was consumed in substitution of quinine. And it may be of interest to compare the cost of this quantity of the drug with that of an equal quantity of quinine. Cinchona febrifuge during the whole of the period just mentioned, was sold to Government officers and to all charitable institutions at the uniform rate of one rupee per ounce. Quinine, as is well known, fluctuates greatly in price.

According to the Government's estimate, the quantity of quinine consumed in India during the year 1901-2, the average year of the Indian war, was 8,000,000 lbs., was eight shillings and four pence per cwt. per cwt. The sterling value of 8,000,000 lbs. of quinine would, at this rate, have been £1,280,000, but the actual cost to the Indian consumer was only £1,000,000, the favorable rates of exchange which prevailed during those years, have been a good deal more. The actual cost to the Indian consumer of the febrifuge, which took the place of this quantity of quinine, was Rs. 14,47,116. The saving, therefore, was very great, and was sufficient to cover the total cost of the plantation four times over and to leave the Government in possession of an estate from which ten thousand pounds of quinine and cinchona febrifuge can annually be turned out.

For ascertaining the value of cinchona bark, I have been fortunate enough to find that which has of late years been sold in the value of quinine. According to a letter which has been furnished to me by our worthy Assistant Surgeon-Colonel R. HAARVEY, the average price of quinine in London during the year 1870 was, as stated by the London shillings and two pence per ounce. From that year it gradually declined until, in 1887, it had fallen to about two shillings per ounce. During these years, as I have already shown, the Indian consumer was able to supply himself with cinchona febrifuge at the uniform rate of one rupee per ounce. The ultimate cause of the great fall in the price of quinine was the action of the Indian Government in distributing cinchona seed in the most liberal manner to all who might apply for it. With the seed thus freely received the planters of Ceylon almost covered with cinchona trees the coffee plantations of that island which had been devastated by the fangoid pest *Hemileia vastatrix*. When the plantations thus too extensively put out came into bearing, the exports of bark from Ceylon became so enormous that the South American export of bark was completely swamped, and prices fell to a quite unremunerative limit. The fall thus brought about has been maintained, until the present time, not so much by exports from Ceylon, which are rapidly diminishing, as by exports from the large tracts of land in Java, which, in a similar manner, had been covered with cinchona trees by planters who had been supplied with seed from the plantations of the Dutch Government in the Preanger Residency.

One matter of importance in this connection is too apt to be overlooked, and that is that the Government quinine is *de puris* as it can be made, whereas much of the quinine sold in the bazars, and especially in the bazars in the *confines*, is sophisticated with other alkaloids, and even with substances of less objectionable character. I have myself seen a sample of quinine obtained in the *market* which consisted of flour flavoured with some bitter substance.

But the crowning advantage of the Government Quinine Factory to the people of India is that it has enabled Government to introduce the system of selling at every village post office pure quinine in packets containing five grains at the cost of one pice—a pice being at present exchange rates equal to a good deal less than one farthing sterling. By this step the Government appears to me to have at last realized what they avowed to be their object when they first entered in the cinchona enterprise, *viz.*, "to put the only efficient medicine for the most fatal disease in the Indian Empire within the reach of its poorest inhabitant."

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CLINICAL REMARKS ON THE PYREXIAL STATE.

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In endeavouring to find out the cause of the fever, we should be careful not to mistake some complication arising incidentally (that of tubercular meningitis, in cases of pulmonary phthisis, of septic inflammation of internal organs from malignant endocarditis of acute bronchitis occurring in enteric fever, etc.) for the primary disease. If there is any doubt, whatever, the observer may relieve his uncertainty by noting whether the supposed cause is enough to give rise to the amount and character of the fever which is present. The pyrexia arising from the specific contagious or infectious diseases embrace a wide field. In this class the diagnosis is comparatively easy when the disease is fully developed, but the physician, who is thoroughly acquainted with the special characters of all the infectious diseases, especially those of the pre-eruptive period, is not likely to fall into error in making a diagnosis. If the pyrexial state is primary, that is unconnected with any local life to produce it or explain its existence, the state is termed "a fever" or a specific, idiopathic, primary or essential fever. In such a fever the blood is believed to be primarily affected by the poison entering into its substance, and for the following reasons:—

(1). A period of incubation indicates the time when the introduction of some specific poison has taken place. (2). The fact that such fevers run a definite course, during which time a very great destruction of tissues takes place, by the decomposition of which, in the absence of food, various substances of unstable chemical composition are formed, and which are attended with a rise in the temperature of the blood. The muscles, the structures of the nervous system, the osseous system, and the red blood corpuscles waste away, while little or no fresh material is assimilated to compensate for the loss. At the same time excreta may be either excessively eliminated, diminished in quantity or

absolutely retained in the system, the products of metamorphosis circulating in the blood—a retrograde metamorphosis, which is increased by the accelerated action of the heart. In such cases critical discharges may occur at the close of the fever, or serious complications may occur during the course of the fever. Its type may assume a dangerous character, becoming typhoid, or ataxic, or malignant. Local complications may also occur especially in the form of inflammation of solid organs, effusions in the joints, abscesses, and the like, which are sometimes called the "dugs of the fever." All these diseases are due to the introduction of a foreign living poison into the system which, after gaining access to the body, remains latent for a certain time, this period of clinical inactivity being known as the period of incubation. The period at which the symptoms manifest themselves after exposure to contagion is of importance for the purposes of diagnosis; for the duration of the latent period or the period of incubation varies with the nature of the disease; probably also with the dose of the poison, and the channel through which it is introduced into the body. After the latent period is elapsed, the disease manifests itself; usually lasts for a definite time; and then ends either in recovery or death. In many of the true specific contagious diseases, characteristic skin eruptions or rashes, which appear at definite periods of the disease, and on definite parts of the body, are observed; these rashes are consequently of great importance in diagnosis. In many there are characteristic local lesions, such as the sore throat of scarlet fever; the ulceration of the intestine of typhoid. Another point which is characteristic of most of these fevers is, that one attack usually protects against a second; as a rule therefore the true specific contagious disease only occurs once in a life-time. Some of them are more common at one period of life than at another, the exanthemata, for example, are usually contracted during childhood. Scarlet fever is rarely met with in infants under twelve months old; typhus is more common in adults than in children, etc. When a fever is considered to be one of the specific type, the attention of the physician should be directed to the following points:—

The presence of a rash; its exact character and distribution; the date of its appearance. The physician must remember that a rash is not always present, even in those diseases which are usually characterized by it. Scarlatina line eruption for instance are not very uncommon; the rash, too, may have disappeared before the case came under observation. In calculating the time at which a rash ought to appear, due allowance must be made for variations in the latent period which seem to occur, and for the difficulty that there is in fixing the exact date of exposure to infection, and the exact date at which the attack commenced. Care must be taken not to confound the eruption due to skin diseases or to drugs (both of which may of course be complicated with pyrexia) with the rashes of fevers.

If we suspect the case to be one of true specific contagious disease, look for a rash and for the symptoms and the signs indicative of the characteristic local lesion; see whether the height of the temperature and the period of incubation are in keeping with the supposed nature of the

case; ascertain if the patient has been exposed to infection; if there are similar cases in the house or neighbourhood; if he has previously suffered from the suspected disease, etc.

When you cannot make a diagnosis at the first visit, isolate the patient and take precautions to prevent the spread of infection in case the pyrexia should be due to an infectious or contagious disease.

The presence of characteristic symptoms and physical signs (other than the skin eruption, just referred to) such for example as the early bronchitis of measles; the bone aches in dengue; severe backache, headache, vomiting, prostration, sweating in small-pox, the diarrhoea, slight fulness of the abdomen, tenderness and gurgling in the right iliac fossa, and the enlarged spleen of enteric fever and so on.

There are other points also which, in doubtful cases, carry great weight in arriving at a definite conclusion, such as history of contagion, of exposure to an obvious source of infection, the date of such exposure, the length of time which has elapsed before the onset of the disease, the appearance of the rash, and other characteristic symptoms; the presence of other cases of illness in the same family or house; the prevalence of an epidemic in the neighbourhood, or in the part of the country in which the patient has been living.

When the exact source of infection is not clear, the drainage of the house in which the patient has been living, the source and character of the water and milk supply, and any other possible sources of infection must be investigated."

The history of a previous attack has its importance, for these diseases seldom occur twice. Although one attack protects, as a rule, against a second, this is by no means always the case, and some people possess the unfortunate idiosyncrasy of again and again contracting the same specific contagious disease (typhus, for example) whenever they are exposed to the contagion. The author remembers the case of a West Indian negro, who was admitted in the height of and suffering from an attack of hæmorrhagic small-pox, whilst his body was "pitted" all over with pock marks. Such cases are, however, rare, or at least much less common than is popularly supposed to be the case. The thermometrics of the various specific infectious fevers are peculiar, each differing from the other in some way or other, to thus form an important guide to their mode of development, and the course they follow. The different specific contagious diseases have distinct, and for the most part characteristic temperature charts—for example, the mode of development and the whole course of the temperature in typhoid, typhus and relapsing fever. The behaviour of the temperature, when rash appears, is a point of some importance. In some diseases—small-pox for instance—there is a decided fall in temperature when the rash appears.

In short, then, the main points which should strike the physician in investigating a case of one of these infectious fevers are:—

- (1) The character of symptoms and their mode of development.
- (2) The nature of the physical signs.

(3) The exact state of the attack and its mode of commencement.

(4) The temperature; its height, mode of development and course.

(5) A history of exposure to the infection and the duration of the supposed period of incubation.

(6) The history of a previous attack of the infections or contagious disease, from which, it is supposed, the patient is suffering.

(7) The age of the patient.

To us practising in India, by far the most important types of fever are those due to malarial poisoning and the main points of indication in them are:—

The periodicity of the pyrexial attacks; the character of the temperature curve (sudden rise, short duration and rapid fall) and the presence of a distinct cold, hot and sweating stage. In some cases the paroxysm of fever occurs every day (quotidian); in others, every other day (tertian); in others every fourth day (quartan); mixed types, such as double tertian, double quartan, etc.; are also met with. As a rule, the attacks of fever occur at the same time of day; in some cases, more especially at the commencement of the disease, the usual time of occurrence is anticipated, instead, for example, of occurring at 12 o'clock each day, quotidian ague may occur on Monday, say, at 12, on Thursday at 11-45, on Wednesday at 11-30, and so on; in cases of this description the fever is said to be wasting. In other cases, the period of occurrence is postponed (Monday 12, Tuesday at 12-15, Wednesday at 12-30, and so on) the fever is then said to be waning.

The duration of the disease is a further point of great significance. Thus malarial fevers, when untreated, may continue recovering for a considerable period; as they have no fixed and definite duration; and even when quinine and other appropriate remedies have been vigorously administered, the fever poison may remain lurking in the system (possibly in the spleen, liver, pia mater, or in the red marrow of the bones) and a paroxysm of fever may come on some months or even years after the first attack of the disease.

Add to the foregoing the fact that in all such cases there is the history of exposure to malaria in some previous period and the evidence is almost conclusive.

As ague is exceedingly common in India the occupation and the residence of the patient (whether he has lived in a malarious district) should always be carefully investigated.

The state of the patient between the paroxysms of ague, the conditions of the spleen, the character of the blood, are all deserving of special attention, and upon the best alone of these a diagnosis may often be made. After the paroxysm passes off, the patient is, as a rule, free from fever and the temperature may, for a time be, subnormal, there is perhaps some lassitude and fatigue, but the patient may otherwise feel well. After repeated attacks the patient is apt to become anæmic and cachectic. During the febrile attacks the spleen increases in size, and after repeated attacks a chronic enlargement of the organ (which has been termed ague-cake) may be established. During an attack of intermittent fever, the red blood

corpuscles undergo a marked diminution; the white globules are usually in excess; pigment granules can often be seen in the blood; and a polymorphic organism, the *plasmodium malaria*, can be demonstrated.

When the pyrexia forms a local inflammation the more salient points to fix one's attention on are:—The presence or absence of any local pain, symptoms of derangement of function of some particular part or organ. Thus at the beginning of an attack of acute pleuritis a sharp, shooting pain in the side, which catches the breath and prevents deep inspiration, is usually a prominent symptom. As a rule, there is a short, dry cough; and the respiration is rapid and shallow. All inflammations, however, are not accompanied with pain. The liver, lung, peritoneum, the nerve centres of brain and spinal cord, and other parts may be extensively inflamed without pain being felt. Hence the special care required in every case where the causes of the pyrexia are not obvious, is the careful examination, by physical and other means of all the internal organs, more especially the kidneys, liver, heart and lungs. We have seen very grave mistakes made in some cases, and it is a regrettable matter that in some the mistakes were of such a nature, that the least care would have eliminated them. The deeper inflammations of the liver are especially liable to be overlooked. Dr. MURCHISON states that in many cases of inflammation of the substance of the liver there is no fever, and when the inflammation is chiefly confined interior to the substance of the organ, pain is absent; but when the capsule, to which the sensory nerves are abundantly distributed, is affected, either by direct implication by the inflammatory process, or by being suddenly put upon the stretch by internal pressure, pain is usually a very prominent symptom.

The presence of abnormal physical signs at the seat of the disease is another point deserving of investigation in localised inflammations. The exact nature of the physical signs, which characterise inflammation of the different internal organs must be known, and if any are present, their proper value must be given them.

Even in localised inflammations the character of the temperature is deserving of note: for in the majority of the acute cases we note that the pyrexia is of the nature we have described in the continued type of fevers. An exception, however, is seen in inflammatory diseases which are attended with suppuration, i.e., the production of pus, or suppurative inflammation.

If you suspect a septic fever, look for an external wound or injury, or other (internal) source of infection; and regard the temperature curve and the general symptoms.

If you suspect the presence of a local inflammation, make a careful physical examination of the organ or part, and ascertain if there is any pain, or if there are any indications of functional derangement.

In all obscure cases of pyrexia, the condition of all the viscera, but more especially of the lungs and liver, must be carefully investigated.

In a case of unknown origin the course to pursue is as follows:—Note the temperature, the general state of the case, and make a scrutinising examination of all the symptoms and of the organs of the body. This duty having been

considerably carried out, the physician must abide the course of events, carefully watching the development of the symptoms which will, as a rule, even at an early stage, enable him to arrive at a definite decision as to the nature of the case.

In cases of imposture or malingering we have to be prepared for the tricks of palats who are often very clever in this kind of deception. The physician must (1) satisfy himself that the increased temperature is genuine. He must see that no external source of heat, such as a hot bottle, poultice, etc., is in contact with the patient; and must take care that the elevation of the mercury is not the result of friction; for it has been suggested that the extraordinary elevation of temperature, which has been observed in some hysterical cases, may possibly have been produced by the patient rubbing the arm against the bulb of the thermometer. The physician should himself hold the thermometer in situ while the observation is being made, and should take the temperature not only in the axilla, but also in the mouth and rectum. The general condition of the patient at the time of the observation and the condition of the part (such as the axilla) with which the mercury is in contact, should be carefully tested. In rare instances there may be very great rise of temperature without any malingering. These are the so-called paradoxical temperatures, always hitherto met with in hysterical females. The chief means of diagnosing these are a history of neuromyosmes, together with the extraordinary character of the temperature curve. The remarkable height to which the temperature may rise, and the sudden variations which occur together with the absence of grave symptoms, in many cases show conclusively the nature of the case.

Having satisfied himself that the elevation of temperature is genuine, and that there is no obvious cause of pyrexia present, he may, by the method of exclusion, be able to conclude that the pyrexia is due to derangement of the nervous system.

For the next step in the diagnosis, he must rely upon his knowledge of nervous disease. Provided that there is no distinct evidence of organic disease and granting that there are symptoms of functional derangement (such as hysterical symptoms), he may feel compelled to conclude that the pyrexia is due to a temporary and functional disturbance of the nervous mechanism concerned in the production and regulation of the animal heat. DR. BYROM BRAMWELL says:—

For my own part I see no reason why such functional and temporary derangements may not occur. Hysterical paralysis, hysterical contracture, hysterical anaesthesia, hysterical dyspnoea, hysterical palpitation, are all well recognised conditions which, like hysterical pyrexia, are, I think, probably due to arrested blood supply, a spasmodic arterial contraction, shutting off the nutrient material from certain of the cerebral nerve centres connected with the motor, sensory, respiratory, cardiac, heat-producing or heat-regulating mechanisms respectively. It must, however, be stated that cases in which a diagnosis of hysterical pyrexia is warranted, are rare. Cases of the kind to which DR. DONKIN has applied the term

'paradoxical temperature,' are of the greatest interest, and require much more careful study than has as yet been given to them. They are calculated, I think, to throw some light upon the position and structure of the nervous mechanism concerned in the production and regulation of animal heat.

It is a good rule which states in hyperpyretic temperatures without grave symptoms, to suspect relapsing fever, or malingering.

When you feel satisfied that the pyrexia is genuine, and that it is not due to a local inflammation, specific, contagious, malarial or septic disease, and when there are nervous symptoms present, you may conclude that the fever results from the nervous lesion.

The differential diagnosis of the exact nature and position of the nervous lesion, and whether it is functional or organic, can only be determined by a careful and detailed examination of the nervous system, and depends on considerations which it would be out of place to consider here.

A MIRROR OF PRACTICE.

A CASE OF UNCOMPLICATED MULTILOCULAR OVARIAN CYST: OVARIOTOMY: DEATH FROM SHOCK.

By EDWARD E. BALM, C.M.S. (Hyderabad.)
District Surgeon, Parbhani.

SUNTHU, a Hindu female *æt.* 45, was admitted into my dispensary with an abdominal tumour, on the 11th September 1895.

Previous History.—Stated that she had had a miscarriage of a four months' fetus about a year and six months ago, after which she noticed a swelling, about the size of an orange above the pubes, this gradually increased in size, and was accompanied with pain. About three months later, a similar swelling commenced in the right side. She had been suffering great pain for the last four months. Since the miscarriage there has been a constant and profuse bloody discharge.

Present Condition.—The patient is very thin, weak and anæmic. A tumour about the size of a cocoanut, tense, hard and immovable, occupies the hypogastric region. A second one, about as big as an orange, lies in the right iliac fossa. There is a double semi-solid cyst in the right lumbar region, extending to the right hypochondriac region, which is adherent above. The os uteri is contracted, and there is a free bloody discharge per vaginam. Intense pain is complained of in the hypogastric growth. On examination per rectum, the tumour is found to be hard and pressing against the bowel.

Diagnosis.—Ovarian cyst.

Treatment.—The patient was kept on tonics and strengthening food for about a fortnight previous to the operation. On the day of the operation the bowels were emptied by an enema and the bladder by a catheter.

Ovariectomy.—An incision, about 8½ inches in length, was made in the linea alba. After a complete dissection, the peritoneum was reached; this being laid open, it was found that the first cyst was free from adhesions; the fluid was

then emptied. The cyst in the hypochondriac region was a little adherent above to the liver. Seven quarts of fluid were removed from this cyst. The pedicle was ligatured with catgut and about an ounce of blood was lost at this time.

The abdominal cavity was washed with a warm solution of borax, then with a solution of carbolic acid (1—100). The edges of the wound were now brought together with double cyanide of mercury dressing.

After the operation collapse set in, and though ether was given subcutaneously and ram by the mouth, the patient died from shock within four hours of the operation.

Remarks.—This case might have been mistaken for one of cancer of the uterus, combined with an ovarian cyst, from the tense, almost immovable mass pressing against the bladder, uterus and rectum; also from the acute lancinating pain and the constant and profuse discharge of blood from the uterus.

The whole operation was extremely simple, and was done most carefully under strict antiseptic precautions, but the stage at which the patient sought relief was hopeless, as she was very emaciated and weak from the profuse loss of blood and the constant pain. I declined at first to operate, but at the persuasion of the woman and her husband I consented to undertake it.

A CURIOUS CASE OF TRANSPOSITION OF THE VISCERA.

By MICHAEL TINDALE, C. M. S.
Chin Chin.

ZUFARSHAH, a Mahomedan Fakir, aged 21, consulted me with regard to treatment for an enlarged spleen.

On examination, I found an enlargement, obliquely situated, and occupying the right hypochondriac, right lumbar and part of the right iliac and umbilical regions. On percussion the enlargement was found to extend from the 6th intercostal space to within 2 inches of the anterior superior iliac spine, feeling along the anterior border of the enlargement, I discovered the characteristic notch 1 inch below the right costal arch, which placed beyond doubt the fact that the spleen was situated on the right.

This excited my curiosity, and I examined the other organs. To my surprise I felt the apex beat of the heart 1 inch below and ½ inch to the left of the right nipple. On percussion a dull note was elicited in the 4th, 5th and 6th intercostal spaces on the right side, while the note was quite resonant on the left. On auscultation the heart sounds were heard on the right side.

On examining the liver, I found its round, smooth margin below the left costal arch.

The above clearly shows that this man's spleen and heart were on the right side and the liver on the left—a condition which, I believe, is rarely met with.

A RARE CASE OF FUNGATING BUBOES.

By K. K. VELU, C.M.S.,
Calicut.

SAUKARM, a Hindu male aged 27, was admitted into the Civil Dispensary, Calicut, on the 29th of January 1895.

Previous history.—Had suffered from gonorrhoea about four years ago. About 6 months previous to his admission he had had a swelling in both groins, which suppurated, leaving indurated ulcers.

Present state.—Fungating buboes in both groins. No pyrexia. Internal organs normal.

Treatment.—Cromic acid solution was freely applied and the parts were poulticed. This was repeated on the fourth day, but it had no effect. On the eighth day the patient was put under chloroform, and the whole mass removed by wire excisor by Surgeon-Major H. C. CARRUTHERS, after it had been removed, the surface was freely cauterized and a poultice applied. This treatment answered remarkably well and in a fortnight's time the patient was fit to be discharged.

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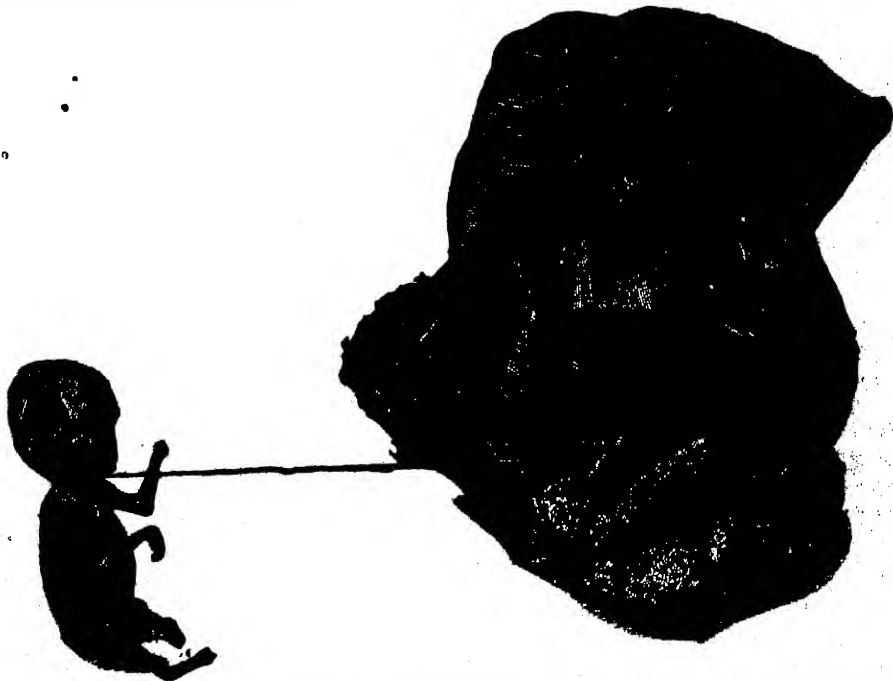
A MUMMIFIED FOUR-MONTH TWIN-FŒTUS RETAINED IN UTERO TILL FULL TERM OF THE OTHER TWIN.

By Z. FELDSTEIN, M.D. (Univ. of New York).

Calcutta.

On the 2nd August 1895 I was called to see Mrs. B., a European lady, of about 38 years of age, the mother of seven children, who was in labor. The nurse in attendance who sent for me, stated that the pains had been on for

refreshed and with pains coming on. I douched the passage with a solution of mercuric chloride and after thoroughly disinfecting my hands in the same solution, I endeavoured to help nature to dilate the os by digital expansion. This served admirably; for in a few minutes there was complete dilatation. The head descended; so I ruptured the membranes, and shortly afterwards with a few good uterine contractions a full-term healthy male child was expelled. Finding that the uterus failed to expell the placenta after waiting half an hour, I again disinfected my hand and passed it up into the uterus. Observing that there was a pretty free bleeding, and that the placenta was not only adherent, but presented a peculiar nodular mass near its centre, I sent for Dr. JAMES R. WALLACE to assist me. On examining the patient, he said the mass was probably a polypus or an aborted mummified twin fœtus. He carefully detached the placenta, and when it was removed, we found within a separate membrane of its own, a mummified four-months' fœtus, having its own separate shrivelled placenta within the sac that surrounded the fœtus. An illustration of the mummified fœtus with its placenta is shown in the diagram here given. The patient suffered from fever for a few days, which was probably due to enlarged and painful breasts, as no indication of any septic trouble from impure lochia showed itself. In connection with the death of the twin fœtus in utero, it is



nearly 40 hours, that the os was almost fully dilated, but that all further uterine action had ceased for four hours. The patient seemed somewhat exhausted and restless, and on vaginal examination, I found the os dilated to the extent of four fingers. There was no rigidity of the cervix, and the uterus itself seemed flabby. I administered a dose of chloral and ergot with ammonia. Within half an hour the patient slept, and awoke an hour later

note worthy to recall the fact, that the patient distinctly remembered that when she was about four months pregnant she slipped in her bathroom and fell. For a couple of days afterwards she lost a little blood per vaginam. She suffered in no other way, and went on to full term. Undoubtedly the fall resulted in the death of the twin fœtus which in every respect exhibited a most perfect mummification.

OUR PICTURE GALLERY.

MOHENDRA NATH OHDEDAR, RAI
BAHADUR, L.M.S.

THE subject of "Our Picture Gallery" sketch, Rai Bahadur M. N. OHDEDAR, was born at Sripur, District Khulna, on 7th January 1856, and when a boy of five, went to Benares, where his father, the late Dr. KALI NATH OHDEDAR, was Assistant Surgeon in charge of the Government Dispensary. He received his primary education partly in the Queen's College, and partly in the Jai Narain's College at Benares. In 1871 he entered the Canning College at Lucknow, and from there passed the Calcutta University Entrance Examination in 1872 and the First Arts in 1874, when he entered the Lahore Medical College, where he received a Government scholarship. In the general educational department, English literature and history were his favorite subjects, but his dislike to mathematics, which was his bugbear, made him leave College at Lucknow and make up his mind to select a profession. He was originally destined for the bar, but the respect that his father commanded at Benares, the high estimation he was held in as a medical man, prompted his son to follow his father's footsteps, which desire was further incited by his having, during school vacations, frequently accompanied his father to the hospital, where he took a pleasure in watching the dextrous mode in which surgical operations were there performed by him.

In the Medical College at Lahore, he scored *high marks* at the first L. M. S. Examination, and obtained the first prize in Anatomy. Passing the second L. M. S. Examination in July 1879, he received the first prizes in Medicine and Midwifery and stood second in order of merit. He entered Government service on 1st August 1879 as a supernumerary Assistant Surgeon, and was attached to the Medical College Hospital at Lahore. Two months later his services were placed at the disposal of the Government of N.-W. P. and Oudh, where his first substantive appointment, was the medical charge of the Pilgrim Hospital at Srinagar, in Gurhwal. This town was washed away the other day by the overflowing of the Gohna Lake. For some reason or other, this hospital was so unpopular with the hill people, that no surgical operation of any importance had been performed for some months past. The following true copy of a report on the hospital by Brigade-Surgeon W. WATSON, M.D., dated 1st December 1881, to the Senior Assistant Commissioner, Garhwal, will give some idea of the state of affairs at that time:— I have the honor to report for the information of the Commissioner of the Division that I have inspected the dispensaries of Srinagar, Karnpryag and Gansal on behalf of the Surgeon-General N.-W. P. and Oudh. I was exceedingly struck by the improvement in the management of the Srinagar Dispensary under Assistant Surgeon MOHENDRA NATH OHDEDAR. When I last saw the Srinagar Dispensary in 1879, I found that not a single important operation had been performed for months past.

Assistant Surgeon MOHENDRA NATH OHDEDAR is popular

in this place and with his subordinates, and is doing excellent surgical work. He showed me two cases on whom he had operated one a successful operation for stone in the bladder, the other a case where he had stretched the ulnar nerve for leprosy of the hand. He also showed me two old cases operated on sometime ago. One excision of the knee joint in a boy, the other operation for cataract in an old man. Both were very successful. The old man saw well and the boy walked on crutches."

The operation for extraction of cataract had never been performed at that hospital, and being young and enthusiastic, Dr. OHDEDAR thought that a few successful operations on the eye would go a long way towards gaining the confidence of the public and raising the popularity of the hospital. The first few cases operated on by him were fortunately successful, and SIR HENRY RAMSAY, who was then Commissioner of the Kumaun Division, was so pleased at this success that he suggested that Dr. OHDEDAR should be appointed Superintendent of all the Pilgrim Dispensaries in Garhwal and Kumaun on a pay of Rs. 300 per mensem and travelling expenses, but this proposal somehow fell through. He applied for and obtained privilege leave (from 7th August 1882 to 9th October 1892) and fully intended giving up service and settling down as a private practitioner if he was not posted to a good station on the expiry of this leave. While on leave, he received orders from Dr. CHRISTISON, Inspector-General of Hospitals, to take charge of Maharaja Vizianagram's Hospital at Benares—the station where his father had been an Assistant Surgeon for over 17 years. He took charge of this hospital on 10th October 1882, and while serving under Surgeon-Colonel W. HOOPER, who is now Surgeon to the India Council, he attracted the attention of Dr. W. WALKER (Inspector-General of Hospitals in these Provinces), and was transferred from Benares to Allahabad, where he was placed in charge of the Female Department of the Colvin Hospital on 25th January 1884. Passing his first septennial examination he was gazetted a second grade Assistant Surgeon on 1st August 1886, and an order of Government of these provinces exempted him from the operations of the "Arms Act." On 23rd January 1893 he was created a Rai Bahadur as a personal distinction, and on passing the second septennial examination he was promoted to the first grade on 1st August 1893.

During these ten years at Allahabad he served under many Civil Surgeons, among whom were Drs. J. OLEGHORN, A. CAMERON, and J. McDONAGHY ANDERSON, FREYER, MACLAREN and HAWKINS; and he secured the good will of all these officers, even though unfortunately he was unable to show an annual return of five or six hundred major operations, among which (in these provinces) operations on the eye are the largest in number but as there is a separate Eye Hospital in Allahabad under the management of Surgeon Lieutenant-Colonel G. C. HALL, an officer with a provincial reputation—to whom the majority of eye-cases go for treatment, there are not many cases left for any one else. Still there are a few Assistant Surgeons in these provinces who can show a record of half-a-dozen or more successful excisions of the upper jaw for sarcoma or of the



Yours very sincerely
M. N. Choudhary



tongue for epithelioma. DR. OHDEKAR is the only Assistant Surgeon in that part of the country who has performed ovariectomy—and though he may show fewer operations on the eye than can other Assistant Surgeons in those provinces, he has not been idle, as is shown by a big list of his general surgical work.

Early in the year 1888 the local Dufferin Committee appointed him their Honorary Secretary, and under his care the Dufferin Fund of Allahabad was very well managed. The Hospital which is under the charge of a Lady Doctor, has become so popular, that in his speech at the opening of the present Dufferin Hospital, on 16th February 1891, SIR AUCKLAND COLVIN spoke of DR. OHDEKAR and his work in very complimentary terms. The gist of the speech was published in the *Pioneer* and the *Morning Post*. The following copy of a letter from SIR AUCKLAND COLVIN, the late Lieutenant Governor of these Provinces, speaks for itself:—

DEAR DR. OHDEKAR,—I write a line to express to you my great pleasure at the Viceroy having agreed to accept my recommendation that you should receive the distinction of Rai Bahadur, which was notified in Saturday's *Gazette*.

"Your labors in the interests of your countrymen and women deserve a better recognition than that which the Government can give them; and personally it is a source of great gratification to me to have been able to give you proof of my strong sense of your services on behalf of the Dufferin Association." Yours sincerely, AUCKLAND COLVIN.

In connection with the Allahabad Dufferin scheme there is a class attached to the Dufferin Hospital for training midwives, nurses and compounders, to whom DR. OHDEKAR had to lecture for an hour every day, and for their use he published a book on Midwifery which was written in Urdu, and after being reviewed at the request of the Provincial Dufferin Committee, N. W. P., was very favorably reported on by Surgeon-Colonel RICHARDSON, Inspector-General of Hospitals. He did not receive any remuneration from the Fund for teaching the girls, some of whom have passed out very creditably and are now attached to the hospitals in these provinces, while others are practising as midwives and nurses.

He was elected a Commissioner of the Allahabad Municipality six years ago, and has since been twice re-elected as a member of the Board. He is in charge of the Vaccination Department of the Allahabad Municipality. He is also Honorary Secretary of the "Anglo-Bengali Preparatory School" and Vice-Chairman of the "Indian Girls' School" at Allahabad. Both of these institutions are private ones, and not under Government control.

The Colvin Hospital, the Dufferin Fund, the training class, the vaccination work, the two schools and his extensive private practice among Europeans and Anglo-Indians as well as natives, keeps him well on his legs, making him work from 12 to 14 hours a day.

DR. OHDEKAR is a Past Master of Lodge "Unity" No. 1698 E. C. and also of Lodge "Independence with Philanthropy" No. 391 E. C., as well as 1st Principal of Chapter "Bandeman" and Master of the "Lebanon Lodge of Mark Master Masons".

THE Indian Medical Record.

1st December, 1895.

A SCHEME FOR THE FORMATION OF AN INDEPENDENT COLLEGE OF MEDICINE IN CALCUTTA.

THE scheme published in our Correspondence columns to-day for the formation of an independent College of Physicians and Surgeons in India, gives shape to thoughts and suggestions that have occupied the mind of the local profession for some time past. We have frequently dwelt on the need for action in this direction as the only apparent escape from the present dominating system which closes the doors of all the medical colleges of the country to men outside the official services. This exclusion has been rightly regarded as a hardship, and it is no wonder that men imbued with spirit and enterprise, having a love for their profession, and inspired with ambition to rise and become eminent in its various branches, should seriously consider the unique and anomalous conditions which trammel their calling in this land, and cause them to devise means for ameliorating these conditions in some way or other.

The scheme which we publish to-day has been prepared by a Select Committee, and its general features have been largely discussed by numbers of our brethren outside the Committee, both English and Indian. In giving it publicity, we do so with the assurance that the scheme has, the approval of the leading non-official European and Indian physicians and surgeons of this city. It has been placed before the Council of the Indian Medical Association, and with the sanction of that body, it goes forth to the medical profession of the Indian Empire.

To give effect to the scheme, it is essential that the machinery, and the wherewithal for working it, must be forthcoming. There must be a sufficient number of medical gentlemen, ready willing and able, to form the Faculty of the College, and there must be money sufficient to start and carry on the work. We have no hesitation in stating, that in Calcutta we have enough men, ready, willing and able, to take up the work of the Faculty at once. As to the essential question of the funds needed, we have enough confidence in so grand and noble a cause, to feel assured that it will not lack the support of our brethren nor of the general public in this land. There is in a scheme of this kind all the elements that call for and even ensure every reasonable prospect of success from so inspiring a source as *self-support*. Such a College, inaugurated and established on small beginnings, has all the elements of success in its own conditional working. Provided the men who are "ready and willing and able," who in the first instance, will give their educational services gratuitously; and students and intending graduates who will pay their fees for study and for their examinations, we find a ready source of income. Of course there is the initial expense of furnishing the various classes with diagrammatic illustrations, specimens, apparatus, &c., but these will speedily be forthcoming from already promised funds. Then, again, there is the essential need

of a hospital, dissection, pathological, chemical, physiological and *post mortem* demonstration rooms, where students of the new College should be able to take out their clinical and practical classes. These difficulties may also be overcome by the sympathetic help of the Bengal Government. It ought to be no difficult matter to find a Government, having a declared policy of encouraging private enterprise and of retiring from State-conducted education, willing and ready to look favorably upon a scheme which promises by its fulfilment, to allow the machinery of medical education to be carried on by private enterprise, to the relief of the overburdened exchequer of the State. In general education, all over our large cities in India, we find that the spirit and energy of private enterprise have succeeded in establishing great and flourishing institutions, which are absolutely independent of Government aid or control in their management.

When the scheme for the College has been finally accepted, it will be the duty of the Indian Medical Association to appeal to the Bengal Government and to the Government of India for such encouragement and help as we have briefly indicated for the efficient and successful working of the College. Failing such encouragement from the State, there is still a wide field of promise and hope, for men in real earnest, whose hearts and minds are definitely and solemnly pledged to a righteous and noble cause, cannot be held back by obstacles. All difficulties sink into insignificance where pluck and honest energy are banded in union. And so it will be with this College scheme. It will succeed. Side by side with the huge, well-supported machinery of the famous Calcutta Medical College, the ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CALCUTTA may look an impossible dream; a veritable bantling alongside of a gigantic oak. This picture may be only too true, but the early history of the Calcutta Medical College is inspiring in this respect, for it started with the zeal of one *Englishman*, who began his work in a tiled hut and taught his first students the art of surgical dressing and drug compounding, and the treatment of minor ailments in this humble sanctum, which soon found imitators in the form of other zealous *Englishmen* and larger buildings, till after one addition and another, the present College,—the worthy successor of their early and inspiring efforts—stands out as a monument of their toil and of the toil of the many able men, who, following in their footsteps, have given to the Calcutta Medical College its excellent and well-deserved reputation. Have we not also the inspiring example of the Colleges of Physicians and Surgeons of London, Edinburgh and Dublin, and the various Medical Colleges of Europe and America. These all have a record of small beginnings. Nearer home and more to the point have we not the example of the CALCUTTA MEDICAL SCHOOL, established by a band of zealous and earnest men, held together and led on by the hand of the learned and worthy President of Indian Medical Association—Dr. LAL MADHUS MUKERJEE.—This School, though it educates only in the vernacular, was started under great difficulties, but the energy and pluck and zeal of its staff have abundantly proved not only its *raison d'être*, but they have more than justified all their laudable plans and intentions. Two years ago nearly, when Sir WILLIAM ROBERTS—the

well-known Manchester physician and medical member of the Royal Opium Commission—, visited the Calcutta Medical School, we had the pleasure of being present on the occasion, and after this experienced educationalist had carefully inspected the school,—its lecture halls, its chemical, pathological, therapeutical and physiological laboratories, its out-door dispensary, its well-arranged and commodious dissection rooms, and had seen its enthusiastic crowd of hundreds of students, Sir WILLIAM's face beamed with joy and satisfaction, and his words of encouragement and congratulation will not soon be forgotten by the medical staff of the School nor by others who heard them and felt a deep interest and pride in the welfare of this School. Dr. ROBERTS mentioned that he was one of the early promoters of the great and famous Manchester School of Medicine, which now boasts of being a full-blown University, and he said that the success of the Calcutta Medical School was most encouraging and satisfactory, and that its promoters and supporters had every reason to be proud of their success. Very heartily do we wish this excellent medical school a prosperous and expanding career in the future.

What then is to hinder the inauguration and successful career of the "Royal College of Physicians and Surgeons of Calcutta"? NOTHING. With a complete FACULTY drawn from the European and Indian members of our profession in this city, we may safely ask and claim the confidence of our country and of our people, and facing the great work before us with determined, patient persevering energy and toil, look forward to sure and certain SUCCESS.

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THE FIFTH MEETING OF THE COUNCIL OF THE INDIAN MEDICAL ASSOCIATION.

IN compliance with the notices issued, the fifth meeting of the Council of the Indian Medical Association was held in its Library on Friday, 29th November 1895. Present:—Dr. LAL MADHUS MUKERJEE, President, in the chair; Dr. E. W. CHAMBERS, Vice-President; Drs. J. G. ANDERSON, MONEY LALL DUTT, H. W. JONES, Surgeon-Major HODGKINS, and Dr. J. R. WALLACE. After reading the notice calling the meeting with the agenda of business to be brought forward, and after reading and confirming the minutes of last meeting and passing the Association bills, the following items were transacted:—

(1) Read the reply of the Government of Bengal to the letter of the Council of the Association, asking that the President of the Council, Dr. LAL MADHUS MUKERJEE, be accepted as the Council's representative for the privilege of a seat in the Legislative Council of the Government of Bengal. The reply being a promising one, it was resolved that the Secretary should make a similar request to the Government at any future suitable opportunity.

(2) Resolved that the Certificate of membership as now duly engrossed, be signed by the Council as soon as possible and forwarded to members entitled to receive the same.

(3) The list of new members was placed before the Council and they were duly elected.

(4) Read a letter to the Council from Mr. M. J. PHILLIPS, C.M.S., requesting that the Secretary of the Association move in his behalf to have the course of study

and the certificate of C.M.S. as granted to Hospital Assistants recognised by the General Medical Council of Great Britain, in view to this class of practitioners being permitted to appear before the various boards of examiners in Great Britain to obtain British qualifications.

Resolved that the Secretary shall carefully enquire into the matriculation and course of medical study through which Mr. PHILLIP and the class of practitioners to which he belongs have passed, and provided that such matriculation and courses of study be fully equal to the demands of the British Medical Council, the Secretary shall take such action as the case demands. The cost of such proceedings to be borne by Mr. M. J. PHILLIP, C.M.S.

(5). Read a letter from Dr. ROGER G. S. CHEW in which he requests that he might be allowed to represent the Association as its delegate in England, in any representation that the Association might deem fit to make to the Secretary of State for India on the "Medical Reform Question."

Resolved that Dr. CHEW's kind offer be declined with thanks.

(6). Read a letter from Dr. K. G. SIRCAR resigning his seat on the Council owing to protracted ill-health.

Resolved that Dr. SIRCAR's resignation be accepted with the Council's regret.

(7). Resolved, that the Secretary do prepare the First Annual Report of the Association for 1895, and that the 28th December 1895 be fixed for the Second Annual General Meeting of the Indian Medical Association.

(8) THE INDIAN MEDICAL PROVIDENT FUND.—The Secretary reported that the scheme for the formation of the Indian Medical Provident Fund was placed in the hands of Messrs. H. E. ABBOTT & Co., of Calcutta, who have kindly consented to be the Agents of the Fund, while Messrs. S. J. LESLIE & SONS have also consented to be the Solicitors of the Fund. He further reported that nearly 120 persons had expressed their desire to join the Fund. The Secretary also announced that Messrs. H. E. ABBOTT & Co. had expressed a wish that a section of the Fund should be thrown open to Planters and other well-to-do members of the European Anglo-Indian and of Indian Communities. Resolved that the Council approve, the scheme, and of Messrs. H. E. ABBOTT & Co.'s suggestion for the co-operation of the planters and others in the Fund, and that the rules and bye-laws and other provisions of the Fund be prepared and placed before the Council at the earliest opportunity.

(9) THE QUESTION OF MEDICAL REFORM IN INDIA.—The Secretary having placed before the Council the numerous articles from the *Indian Medical Record* dealing with the question of Medical Reform in India, it was resolved that the Secretary do forthwith prepare a clear and exhaustive statement of the whole matter on the lines indicated in the epitomized programme condensed from the *Indian Medical Record* by the *British Medical Journal*, in which the latter organ has given the following brief sketch its complete approval:—

(1) To put a stop to military surgeons going into civil duty; (2) to cause all military surgeons, now in civil work, to return to military duty; (3) to throw the "expert" or specialist's posts and teaching appointments open to competition here and in England; (4) to instal the *Unconvened* as the nucleus of the *Indian Civil Medical Service*,

and to fill up all civil vacancies from the special additions that will be made to this service; and, (5) to utilise military surgeons and military assistant surgeons with British and Indian troops under one centralised organisation, tantamount to an amalgamation of these services.

It was further resolved that the Secretary be empowered to request, and authorise the representatives of the Council of the Association in Bombay, Madras, the N.-W. P. and Oudh, Burmah, the Punjab and the Central Provinces, to co-operate in this movement, and to aid the Association in raising funds for such action as the Council may deem necessary and expedient, either for the support of a delegate to represent the cause of Indian Medical Reform in England, or any suitable representation to Parliament on the subject.

(10). THE FORMATION OF AN INDEPENDENT COLLEGE OF PHYSICIANS AND SURGEONS IN CALCUTTA.—This important matter was very minutely and warmly discussed, and after all the *pros* and *cons* of the case had been fully considered, it was resolved that the scheme as published in the *Indian Medical Record* of 1st December 1895, be placed before the medical profession in India, with a view to early action being taken to inaugurate this scheme.

COMMENTS AND NEWS.

IMPORTANT MEDICAL COUNCIL NOTICES.

(1). EVERY Registered Practitioner should be careful to send to the BRANCH REGISTRAR by whom he was originally registered (*see* the notified addresses) immediate notice of any change in his address, in order that such change may be duly inserted in the "MEDICAL REGISTER"; and also to answer at once any letter of enquiry that may have been sent to him in regard thereto.

(2). It is important for every registered practitioner to remember that if the above request be not complied with, such practitioner is, by Section 14 of the "Medical Act (1858)," LIABLE TO HAVE HIS NAME ERASED FROM THE "MEDICAL REGISTER," and in consequence by Sections 31 to 39 of the said Act, to lose the right to hold certain appointments, to sign valid certificates, or to recover in any Court of Law, charges for professional aid, advice, and visits, and the cost of any medicines, or other medical or surgical appliances, rendered or supplied by him to his patients.

(3). Any medical practitioner, whose name has been removed from the "MEDICAL REGISTER," pursuant to the provisions of the above-cited Section 14 of the Medical Act, should, if he desires to be restored to the "REGISTER," immediately apply to the BRANCH REGISTRAR by whom he was originally registered.

(4). Notice should also be sent to the same BRANCH REGISTRAR of any addition to his qualification that a registered practitioner may wish to have inserted in the "MEDICAL REGISTER."

(5). On April 21, 1883, the GENERAL MEDICAL COUNCIL passed the following Resolution:—

"That the COUNCIL record on its Minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified assistants and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, are, if brought before the COUNCIL, regarded by the COUNCIL as charges of infamous conduct under the Medical Act."

(6). With an earnest desire to put a stop to this wrongful practice, the GENERAL COUNCIL passed the following further Resolution on November 26, 1887:—

"That it be referred to the EXECUTIVE COMMITTEE to consider, under what circumstances a registered Medical Practitioner would render himself liable to the censure of the COUNCIL, in reference to the employment of unqualified assistants."

(7). On 27th February 1888, the EXECUTIVE COMMITTEE, without attempting to make a formal definition of the misconduct in question, reported to the GENERAL COUNCIL that in its opinion, "A registered medical practitioner would render himself liable to the censure of the MEDICAL COUNCIL, in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services, or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner."

(8). In reference to the procedure known as "covering," the EXECUTIVE COMMITTEE also stated that, in its view, a registered practitioner covers an unregistered person when he does, or assists in doing, or is party to, any act, which enables such unqualified person to practice as if he were duly qualified.

(9). The EXECUTIVE COMMITTEE furthermore called attention to a Resolution, passed by the GENERAL COUNCIL on April 21, 1893, which implies that, in the COUNCIL'S opinion, "any registered practitioner practicing for gain, who knowingly and wilfully deposes a person not registered, or qualified to be registered, under the Medical Act to professionally treat on his behalf, in any matter requiring professional discretion or skill, any sick or injured person, 'should' be subject to the same legal liabilities as a person who falsely represents himself to be a legally qualified medical practitioner; but with special proviso that such enactment 'should' not hinder any duly regulated training of pupils in medical schools or otherwise by legally qualified practitioners, nor the use of trained pupils in partially treating the sick or injured, under the direction, supervision, and responsibility of such practitioners, nor any legitimate employment of nurses, midwives, or dispensers."

(10). From time to time, the COUNCIL has investigated several cases in which registered medical practitioners have been charged with permitting and enabling unqualified persons to practise under cover of the names and qualifications of such registered practitioners; and when the charges have been proved, the COUNCIL had adjudged these practitioners to have been guilty of "infamous conduct in a professional respect," and has ordered their names to be erased from the Medical Register.

MILITARY ASSISTANT SURGEONS WRONGLY DESIGNATED "SUBORDINATES."

It is remarkable that the *Indian Articles of War*, which came into force on the 1st April, should so conclusively uphold our recent contention, that the alteration of the departmental designation of the Military Assistant Surgeons' Service from "Indian Medical Service" to "Indian Subordinate Medical Department," in supercession of the orders of the Secretary of State for India, was not only an illegal step, but an anomalous one, and that therefore, the action of SURGEON-MAJOR-GENERAL RICE was *ultra vires*, and ought not to be permitted to stand. The *Indian Articles of War*, from which we quote, enact:—

"*Clause (8) application of articles* :—These articles shall apply to all

(a) Persons to whom they actually apply at present.

(b) Persons commissioned or gazetted as Native Officers, or gazetted as Warrant Officers of Her Majesty's Indian Forces.

(c) Medical Subordinates *Clause (c) Definitions*. In these articles unless there is something repugnant in the subject or context:—

6. *Medical subordinate* means a Senior Hospital Assistant, a Hospital Assistant of the 1st, 2nd or 3rd class, and a Sub-Hospital Assistant, but does not include an officer.

7. *Superior officer*, when used in relation to a person subject to these articles, includes a Warrant Officer, a Non-Commissioned Officer, and an acting Non-Commissioned Officer."

Now it is absolutely indisputable in the face of this clear ruling, that under the term "superior officer," is included a Warrant Officer, and Military Assistant-Surgeons are all of them Warrant Officers, while some are Commissioned Officers. How then can the term *subordinate* apply to any grade of Military Assistant-Surgeons and much less so to their commissioned grades, and for the same reason how can their service be designated *Subordinate*?

We protest that the interference that was adopted by DR. RICE was a direct violation, not only of the Secretary of State's orders, but the term *Subordinate* as applied to Military Assistant-Surgeons is still in direct antagonism to the *Indian Articles of War*, and the sooner the slur is removed, the better will it be for the reputation of the Office of the Surgeon General with the Government of India.

BILIARY CIRRHOSIS IN CHILDREN.

SEVEN cases presented all the symptoms observed in the adult; but, in addition, in many instances there was hypertrophy of the spleen. So marked is the splenic enlargement where there is not great enlargement of the liver that the true nature of the disease may be easily mistaken. We believe this associated enlargement of the spleen is peculiar to cases of biliary cirrhosis commencing in childhood; a further peculiarity is the frequency with which clubbing of the fingers may be observed; in some instances there was enlargement of the ends of the femur and tibia. The backward and stunted appearance of affected children indicates the influence of the disease on the general nutrition.—GILBERT and FOURNIER, in *Revue des Maladies de l'Enfance*.

DR. NIM CHAND GUPTA.

WE regret to report the death of DR. NIM CHAND GUPTA, first grade Assistant Surgeon, from fever, which took place on Monday last, the 25th November, at his residence at Chasadhopara at the age of 65 years. The deceased gentleman served Government in varied capacities and places in Upper India for a period of thirty years, and was placed in charge of the Calcutta Mayo Hospital before his retirement. The services of DR. NIM CHAND were sought by some of the leading families of Calcutta after his retirement where his professional attainments were highly appreciated. He leaves a large circle of friends and relatives to mourn his loss.

NEW CHOLERA RULES.

A Committee will assemble in Calcutta in January to revise the present Army cholera rules. The Committee will be composed of the Quartermaster-General in India, the Principal Medical Officer with Her Majesty's Forces in India, and the Sanitary Commissioner with the Government of India, associated with MR. TARNER.

THE CONTROVERSY OVER THE HEALTH OF CALCUTTA.

THE Lieutenant Governor of Bengal in his Resolution on the Calcutta Health Officer's Report on the sanitation of this city, makes some controversial remarks on DR. SIMPSON'S views, to which the latter replies in a daily paper as follows:—

"In your leader of to-day on my annual report, you state that SIR CHARLES ELLIOTT, in his Resolution on the Municipal Report, shows conclusively enough that DR. SIMPSON'S allegation that fevers of a typhoid type are largely increasing in Calcutta, is not borne out by figures produced by him. You would be perfectly right, and so would the framer of the Resolution, if the facts as stated were correct, which, unfortunately for the Resolution, they are not. I had intended to let the Resolution pass, for it shows an extraordinary amount of ignorance on the subject of the sanitation of Calcutta, as all these Resolutions issued by unprofessional people on sanitation and on medical matters invariably do. But as you have dealt with the subject publicly and my silence might in this instance seem assent, and thus indirectly retard the works which DR. BALDWIN LATHAM showed were necessary, I may state for your information that I made no such allegation either in my annual report or elsewhere. My contention always has been that the mortality under the heading of fevers and other causes, which are diseases that should be materially reduced by efficient drainage, are on the contrary increasing, and that this is due to the defective condition of the sewers which, in consequence of an obstructed outfall, due to tidal influences and deficient pumping power, are simply elongated cesspools. At the present moment we are living over sewers which are practically never emptied of their sewage for any length of time, and this, apart from the question of leakage, is a condition which is most fatal to the public health. I always make it a point not to ventilate my views in letters in the public prints, but when I see the Government of Bengal so ill-advised as to treat lightly a subject which is of vital importance to the inhabitants, I feel it is time to speak out."

This is as it should be, and we cordially support Dr. SIMPSON.

THAT BRUTAL, CIVIL SURGEON! THE LIE NAILED.

SURGEON-MAJOR J. CROFT, writing from Rajputana, has something to say of the Rev. WILLIAM BONNAR'S article entitled "The English in India" which appeared in the October number of the *Contemporary Review*.—MR. BONNAR tells a story about a Civil Surgeon who extracted two teeth from a native for not removing his face cloth. It is improbable that there are many people in India so credulous as to believe this story even though it reaches them from the pen of a reverend missionary. I am the Civil Surgeon referred to. The tooth extraction story was, of course, a pure invention told of me by a well-known maker of good stories, and may have been repeated by me as I heard the story and in the same spirit—the original story was that I extracted one tooth. That MR. BONNAR should believe a medical officer to be capable of the action he describes, and that he should publish this obvious invention as a fact in one of the leading English magazines is, I think, a sufficient indication of the amount of reliance to be placed upon his statements generally, and of the weight to be attached to his opinions. Of the glowing inaccuracies, misstatements and suppressions, of which MR. BONNAR'S article is mainly composed, I will leave some better qualified person to speak; it should, however, be made known that it is solely owing to the intercession of the very Political Officer be so freely

maligne and bespatters, that MR. BONNAR and his brother missionaries have any footing in the Native States at all. To quote MR. BONNAR with a slight alteration, there is probably not one native ruler in India who would not gladly pay the mission expenses over and over again if thereby he could get rid of its irritating presence.

FEAR IN ANÆSTHESIA BY CHLOROFORM.

SURGEON-MAJOR JOHN SMITH, M.D., I. M. S., General Hospital, Madras, writes to the *British Medical Journal*:—"During my recent holiday in England I attended several of the London hospitals and observed closely the mode of administering chloroform and the results in these institutions. It was over twelve years since I had last witnessed chloroformisation in England, and I had practically forgotten what the process there looked like. What struck me chiefly was the look of terror on the faces of most of the patients as they prepared themselves to submit to the anæsthetic—thus the staring, the struggling, and the shallow breathing, during which I was frequently in terror lest I should indeed witness a death from chloroform. Nothing could form a greater contrast with all this than the happy anticipation of freedom from pain which I may say invariably characterises our patients in the East when chloroform is about to be administered for any purpose. When unconsciousness is setting in, frequently a certain amount of struggling takes place, but it is hardly ever violent, except in the case of the few who, unhappily, have been the victims of drink."

During the ten years I have been attached to the General Hospital, Madras, in which chloroform has been administered about 2,000 times a year, the above has been my invariable experience. During that period not a single death from chloroform occurred. Two deaths occurred during the ten years while the patients were under chloroform—one from hemorrhage, and one from suffocation by stercoraceous vomit.

If DR. LAUDER BRUNTON would turn his attention to this immunity from danger which accompanies the use of chloroform in India, some clue might be obtained towards solving its dangerousness in England. It is a point well worth the exercise of the great abilities of that distinguished therapist."

THE MORALS OF A SURGEON.

The *Hospital* says:—What a man does is the proof to the world of what a man is. Many good people fear that the advance of science will bring about the retrogression of morals and religion. We do not agree with them. But if they cannot accept our judgment, let them weigh well a fact like this: MR. JONATHAN HUTCHINSON, F.R.S., and ex-President of the Royal College of Surgeons, addressed his professional brethren assembled in annual congress the other day, and he thus spoke: "I bore with such equanimity as I could, the discovery that I could not compete with my friend in the ratio of successes obtained (in operations for ovariectomy), and, acting on the rule of conduct that I would never keep a patient in my own hands if I believed that someone else could do what was needed with greater prospect of success, I gave up doing ovariectomies, both in public and in private, and used to transfer my patients from the London to the Samaritan Hospital." Here is a rule of conduct which has never been excelled in moral worth, in any department of professional life or private behaviour. A most far-reaching and truly noble rule is this of MR. JONATHAN HUTCHINSON'S; and the fact that he announced it toward the close of his career in the hearing of hundreds of his

professional brethren, who are almost as familiar as he is himself with the conduct of his professional life, is proof that he spoke mere truth. If these are the morals of men of science, may we not say of men of all professions and callings, *O si sic omnes!*

AN AMERICAN PARABLE OF THE BLACKSMITH AND THE PHYSICIAN.

A CERTAIN man was hanged, and he died, and he left two sons, honest men. Now, one of these sons was a blacksmith; but the other became a physician. And after their father had been taken from them, those brothers made their homes in other lands. And the blacksmith would have prospered, but it befell that some one asked him how his father died. And the blacksmith, looking angrily upon him, answered: "He was hung." For the blacksmith was an honest man. Howbeit presently, when a horse was missing, men gathered and seized and hanged the blacksmith, saying: "This man must take after his father." So the blacksmith did take after his father. And, at the same time, in his own city, one inquired of the physician by what means his father died. And the physician covered his face and wept. But whilst he wept, he considered, saying within himself: "If I say, he was hanged, then shall I shock this man, and give him pain. Nevertheless I must tell the truth." He said, therefore: "My father died of heart failure." And again he wept, the questioner weeping with him. Then this being told, men said: "Doubtless, since his father died of heart failure this good physician and loving son hath made a study of kindred diseases." So they resorted unto him. And the physician became a specialist, and he looked at them who came in and coughed once and sneezed twice, and demanded \$100. And they gave gladly. For the physician was an honest man.

SANITARY VANDALISM.

THE proposal of the Government of India to abolish a considerable number of Deputy Sanitary Commissionerships in order to raise funds for the establishment of a Bacteriological Institute at Agra is one which, if it has really been seriously entertained, is certain to come in for no small amount of severe criticism. Sanitation is still so backward in this country that even a Bacteriological Institute, valuable as it would undoubtedly be, would be too dearly bought at the price proposed. Even as it is, the existing Sanitary staff find it impossible to accomplish more than a tithe of the work which lies at their hands; and in some instances the removal of the Deputy Sanitary Commissioner would mean the practical cessation of detailed sanitary work, and all the good which might be achieved by the Bacteriologists would be counteracted by the evil involved in depriving the country of the already sufficiently meagre protection it may derive from sanitary work.

THE INDIAN MEDICAL PROVIDENT FUND.

THIS Fund is now nearly an established institution. The scheme has received the approval of the Council of the Indian Medical Association, and Messrs. H. E. ABBOTT & Co, the well-known Merchant-Agents, have undertaken the Agency of the Fund. The Bank of Calcutta are to be the Bankers, and Messrs. S. J. LESLIE and SONS the Solicitors of the Fund. As it will afford us much pleasure to see the Fund in an assured and prosperous position, we would urge upon our brethren of every class to send in post-cards to our office, indicating their willingness to join the Fund. The whole prospectus will soon be placed before the profession. The following names have been added to the list of candidates willing to join the Fund:—Asst.-Surgn. W. G. Carleton, I.M.S., Benares; C. B. Buxee, C.M.S., Dhula Junction; K. Krishnamanglu, C.M.S., Shimoga; P. V. Yagambara Moddhar, C.M.S., Jabalpur, C.P.

This makes a total of 113. Let us have a thousand names soon.

THE PROSPECTS OF INDIAN VETERINARY STUDENTS.

A MEMORIAL signed by no less than forty-three of the students of the Bengal Veterinary School at Belgaichia has been addressed to the Lieutenant-Governor, praying for more liberal treatment as regards appointments and emoluments. They point out that the calling of a Veterinary Physician is not held in high repute in this country, and as it has been the traditional occupation of some of the lowest classes of the Hindoo community, it is not likely to have any attraction for young men belonging to the respectable classes of society unless the prospects of the profession are improved and made at least equal to those of the graduates of the Bombay and Lahore Veterinary Colleges.

HARD-WORKED A. M. S. OFFICERS.

The *British Medical Journal* says:—"The conditions of foreign service, especially in India, are exceedingly hard and destructive to health. The medical staff, especially the ill-paid juniors, consider themselves both literally and metaphorically 'sweated' by the Indian Government; they experience all the disadvantages without enjoying any of the advantages which fall to their brethren of the Indian Medical Service." We would strongly recommend a 50 per cent. reduction of the numerical strength of the A. M. S. for India, and their place to be taken by Military Assistant Surgeons.

AN INDIAN L. M. S. IS A UNIVERSITY GRADUATE.

Dr. Frederic G. Hallet, Secretary to the Royal Colleges of Physicians and Surgeons of London, in writing to an Indian correspondent, says:—"A Licentiate in Medicine and Surgery of an Indian University is not a Graduate; the latter term referring, only to Bachelors and Doctors of Medicine." Now Dr. Hallet may be quite right as regards the application of this view in Great Britain, but the laws of this land and the regulations of its Universities give the title L.M.S. dignity of a degree and its holders are graduates.

SHORT ITEMS.

"The jamun is an Indian fruit seldom eaten by Europeans, though not at all unpalatable; if shaken up with a little salt. It is useful in dysentery. The juice of the jamun, made into vinegar by exposing it to the heat of the sun, is used for 'spleen.' By the way, the jamun makes good wine, and even brandy of good quality has been made out of this fruit." So says the *Morning Post of India*.

Marro found that thirty-one per cent. of criminals whom he studied were children of alcoholized parents; and Rossi, out of seventy-one, found thirty-one per cent of the same hereditary taint. This includes those who were criminals from direct intemperance only so far as they were children of drunken heredity.

Mr. W. B. Saunders announces that "An American Year-Book of Medicine," edited by Dr. George M. Gould of Philadelphia, will be ready for delivery on January 1st. It is his intention to publish this work yearly, and he expects it will have an extensive sale throughout the United States, as well as abroad.

All interested in the cause of female education will be glad to hear that Mrs. D. N. Ganguli, B.A., L.B.O.P. and S. (Edin.) has made a highly successful professional visit to Nepal. Her patient was the Rani of the Commander-in-Chief of the Nepalese Army, whom she has treated with most satisfactory results.

Surgn.-Lieut.-Col. and Mrs. Tomes have arrived at Midnapore. Surgn.-Capt. O'Gorman is thus relieved, and goes to Chota Nagpore. He and his sister will be much missed.

Dr. Roger G. S. Odell's connection with the *Indian Medical Record* ceased from the 30th November 1905.

There have been recently three successful cases of excision of the spleen for injury at St. Thomas's Hospital. As these are, we believe, the first successful cases that have occurred in Great Britain, the profession will look forward with interest to learning the details.

A French medical journal says that the authorities at Dieppe have issued instructions to the bathing-police, among which is a paragraph directing them never to seize a drowning woman by the hair, as that might come off, leaving the owner to sink.

The admission of women to the examinations of the Royal College of Physicians of London formed the subject of a petition, which was rejected by a small majority. It is feared the Surgeons will act similarly towards a petition sent them.

At the Esplanade Police Court, Bombay, Drs. DeSilva, Nanji Shamji and Sorabji Rustomji, medical practitioners, were charged with possessing a preparation of opium without a license. The magistrate warned and discharged the first and third accused, and fined the second accused Rs. 10.

The new dissecting rooms in the Calcutta Medical College have already been taken into use. They comprise nine thousand square feet of space and are fitted with marble slabs and all the latest appliances.

We desire to state without any reserve that the letters appearing in this journal on the subject of "Officials and private practice" signed W. C. were not written by Dr. William Coulter of this city.

In the public schools of Germany, the bright pupils are separated from the stupid ones. Medical men do the sorting. Principal Bowford must have undergone some part of his training in Germany.

A monument to Professor Billoth will soon be erected in the court of honor of the University of Vienna. The Council of the Faculty has also decided to erect a monument to Skoda and Rokitsansky.

The *British Medical Journal* stated that at Meer Meer, owing to the boiling of water supplied to the British troops throughout the hot weather, there has been practically no enteric in cantonments during the summer.

The Calcutta Municipality has resolved to continue its subscription of last year to the anti-choleraic experiments inaugurated by Dr. Haffkine.

Alarmed by the ravages of strong drink, the Belgian Government has ordered the display in all school-rooms of a printed placard setting forth the injurious effects of alcohol.

Dr. Gilbert Park is an M.D. of the University of Glasgow. He is a specialist in ophthalmics, and is already acquiring quite a handsome practice in this city.

The *Calcutta Gazette* contains an edict that all graduates of the Calcutta University shall in future wear their academic gowns on all public occasions.

Temperance is the proper control of the appetites; it implies the moderate use of good things, and total abstinence from hurtful things.

Sir Dennis Fitzpatrick opened a hospital, at Nabha, which has been erected by the Raja at a cost of Rs. 80,000.

A new hospital called after the Duchess of Cornwall has been opened at Peshawar by the missionaries there.

Current Medical Literature.

MEDICINE.

The Prevention of Nocturnal Enuresis.

STUMPF offers a rational method, which he has employed with success, for the prevention of nocturnal enuresis. It is based on the fact, that the passage of even a few drops of urine through the sphincter vesicæ excites the action of the detrusor to such an extent that the call to micturate becomes almost imperative. Stumpf's theory is that during sleep the sphincter of the bladder is apt to become relaxed, so that, as the child lies horizontally in bed, a little urine passes the sphincter and enters the urethra. The irritation of this urine causes at once strong reflex action of the detrusor, and the bladder is at once emptied in a full strong stream. It is a well-known fact that in nocturnal enuresis in children the urine does not leak away gradually, but the bladder is emptied at once, a point which is in support of this theory. Stumpf's simple method of preventing this is to allow the child to lie with the pelvis elevated, by means of pillows under the thighs, at an angle of 180 to 185 degrees with the horizontal spine. This elevation causes the accumulation of urine in the bladder to gravitate back and distend the fundus, and thus prevent its pressing upon the sphincter. This method has to be put in action for about three weeks, and by its means Stumpf has succeeded in curing two inveterate cases, one in a boy of nine, and another in a girl of fifteen.

The Etiology of Locomotor Ataxy.

DR. PITRES of Bordeaux, has made extensive investigations in the hope of throwing light upon the still doubtful points in the etiology of this disease. His first results were published in a thesis by Dr. Bereni and comprised 225 cases. The influence of syphilis was found to be great, but not overwhelming, and was by no means in keeping with recent ideas on the subject (*The Lancet*). In considering those cases in which the etiology was certain, there were 125 out of 225—i. e., 55.5 per cent.—and even in many of these cases the syphilis was associated with other causes of tabes dorsalis as hereditary joint affections, alcoholism, sexual excess, etc., so that the exact percentage which could safely be attributed to syphilis was reduced to 22.23 per cent. Of the other patients about 38.44 per cent. had no sign of previous syphilis, and twice during his experience DR. PITRES has seen tabetic symptoms precede syphilitic manifestations, so that these statistics tend to show that though syphilis is a cause it is not by any means the only one, but that many other conditions also play their part in setting up the disease. There is also in DR. BERENI's work a chapter on the investigation of the heredity of tabes, but no direct tendency to inheritance was found.—*N. Y. Med. Rec.*

Objective Signs in Gastric Disease.

LION AND HAYEM, in continuing this subject, make some remarks on the shape of the abdomen under the heading of inspection. (1) Prominence of the abdomen in the upper part is seen in large eaters, such as diabetics. (2) Prominence below may occur in many conditions, as in women who have borne many children, gastroptosis, etc. (3) A central prominence extending from the lower part of the sternum to below the umbilicus, is seen after a full meal in patients with pronounced dilatation without ptosis of the stomach. (4) Flattening of the abdomen with hypogastric prominence occurs in those having dilated stomachs with ptosis. A slight transverse ridge may often be seen corresponding to the lesser curvature of the stomach. The abdomen observed in profile may show: (a) A substernal hollow; this occurs in

inattention, frequent vomiting, etc. (b) An abnormal prominence, mostly subternal or epigastric, due to distension of the stomach. (c) A flattening of the epigastric region with hypogastric prominence seen in gastric dilatation with ptosis.—*B. M. J.*

The Nature and Treatment of Leprosy.

In a paper on leprosy, which was awarded the Alvarenga prize by the College of Physicians of Philadelphia, RIBB concludes:—

1. That leprosy is a specific disease due to the presence of *lepra bacilli*.
2. That leprosy is influenced by race, climate, soil, food, etc., only in so far as these tend to enervation on the one hand or to physical well-being on the other.
3. That experiments have not demonstrated leprosy to be inoculable on man or beast.
4. That leprosy is hereditary.
5. That leprosy is contagious, infectious, and communicable, under conditions not yet understood.
6. That leprosy is both mitigable and curable.
7. That chaulmoogra oil is a drug of unquestionable value in the treatment of leprosy.
8. That leprosy may be completely eradicated from the list of human ills.—*Gaillard's Journal*.

Monoarticular Rheumatism.

HEIDENHAIN calls attention to the occurrence of cases of articular rheumatism with involvement of but a single joint, and an absence of manifestations of an acute febrile disorder. Pain is present usually, but in slight degree. Other causative affections, such as traumatism, gonorrhoea, osteomyelitis, tuberculosis, syphilis, were with certainty excluded and relief was afforded by the administration of full doses of sodium salicylate. In the cases observed the shoulder-joint was most frequently involved; then in the order of frequency the wrist, the elbow, and the ankle. In an additional number of cases two joints were similarly involved. The question is raised whether an insidious endocarditis may not develop in the course of attacks of this kind.—*Medical News*.

The Warm Bath as a Diagnostic Measure.

RICHARDSON calls attention to the use of the warm bath in the diagnosis of diseased conditions of the abdominal cavity. The water of the bath is brought up to the natural temperature of the body, and the patient is allowed to recline in the water with all parts immersed except the face and head for a quarter of an hour before the examination commences. By that time the skin has become flaccid, and the parts beneath, especially the abdomen are more readily felt through the abdominal walls. The method is applicable not only to emaciated subjects, but also to the obese.—*Asclepiad*.

Cysticercus Cellulose in Man.

BERGH publishes the first case observed in Norway. The patient, a healthy young man, had two years and a half previously developed a tumour in the right posterior axillary line, which had become larger and tender for the last four months. At the time of observation it was inflamed and fluctuating, and 7 cm. to 8 cm. in diameter. On incision an elastic bladder, 2 cm. in diameter, was discharged with the pus. On examination by HEIBERG this was found to be the cysticercus of the *tenia solium*.—*Gaillard's Med. Jour.*

Medical Brevities.

Tabes Dorsalis.

If a person has paroxysmal vomiting and complains occasionally of violent rheumatoid pains in the legs, examine most carefully for tabes. You will frequently be surprised

at the ease with which you can make the diagnosis.—*DOCTOR HIRT.*

Convulsions.

Produced by a drug can be produced only in five ways: 1. They may be epileptiform—i.e., cerebral. 2. They may be conceivably due to stimulation of the peripheral ends of the motor nerves. 3. They may be conceivably caused by irritation of peripheral ends of sensory nerves. 4. They may be muscular—i.e., due to a direct action on the muscles. 5. They may be spinal.—WOOD.

Intra-cranial Pressure.

The classical symptoms of intra-cranial pressure are headache, vomiting, and optic neuritis.

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SURGERY.

The Treatment of Epistaxis.

MR. SHEILD gives some very instructive remarks upon epistaxis, which will be very useful to most people. He classifies the causes of nose-bleeding as follows:—1. Traumatism, either blows or the result of operation. 2. Ulceration of the mucous membrane, especially small ulcers of the septum. 3. New growths of the nose, especially fibrous polypus and malignant disease. 4. Symptomatic from such diseases as pneumonia, hepatic cirrhosis, cardiac disease, aneurism, fevers, &c. 5. Vicarious menstruation. Before speaking of its treatment, MR. SHEILD gives this useful rule—always look upon epistaxis as a *symptom*, and endeavour to discover its cause. As regards treatment, his remarks may be summed up as follows:—1. If the epistaxis is salutary, leave it alone. Should the bleeding become dangerous and obstinate, proceed thus: Let the patient sit up before an open window—never lie down—so as to keep the head higher than the trunk; use ice locally and to the back of the neck. Immerse the lower extremities in hot water up to the knees, and give small doses of digitalis with ergot every three hours. 3. Speaking of local remedies, the best and only sensible method of using powerful astringents is by first detecting the bleeding spot by proper illumination through a speculum. This done, such remedies as turpentine, sulphate of iron, hazeline, etc., can be applied directly to the spot on an armed probe. 4. Should it be necessary to plug the nares, Cooper Rose's india-rubber tampon should be used, or if this instrument is not obtainable, lint can be used. In either case, always soak the plug in some antiseptic, and cover with boracic acid, and always remove in twenty-four hours. There is a serious objection to the use of the plug, in that it may set up acute middle ear inflammation. 5. Lastly, do not be deceived into mistaking epistaxis for hæmatemesis, as not uncommonly blood from the nose may be swallowed during sleep and vomited afterwards.—*Med. Times*.

Sprains and their Appropriate Treatment.

PRIMROSE holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For this, immediate treatment of a recent sprain, pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the middle of the leg. The amount of wool must be considerable; loosely applied, and should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton-wool. This usually alleviates pain

immediately by affording pressure to the blood-vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is re-applied to prevent further effusion. In ten to fourteen days cotton-wool may be dispensed with, and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion and do harm if employed too long.—*Canadian Practitioner*.

Color-Blind Women recurring in Two Generations.

WHILE the percentage of color-blindness in men varies from 8 to 5 per cent., in women it is extremely rare, and the proportion is only given as about $\frac{1}{4}$ per cent. WENDELL REBER records the case of the wife of a physician who was color-blind. Two of her sons were stated to be similarly affected, and two of her sisters had the same peculiarity. Inquiry into the family history elicited the fact that all the patient's sisters (numbering three) exhibited impaired color-perception, and that her only brother also possessed the defect. All the members, therefore, of one branch of the family were subjects of sub-normal colour-perception. Their father was one of a similarly afflicted family. Both his brothers and his three sisters were color-blind. Moreover, the father married a woman, who, though possessed of normal color-sense, had an only brother who was entirely color-blind. The history could not be traced back to the patient's paternal grandparents. As far as could be ascertained she thought the grandparents on her mother's side were not color-blind. Two of the patient's three sons were affected, while her daughter was immune. One of the affected sons was twin brother to the one who was free from the defect.—*Quart. Med. Rev.*

Lumbar Puncture for the Removal of Cerebro-Spinal Fluid.

DR. WILLIAM BROWNING states:—

1. The method is simple, easily practiced, and rather attractive.
2. In itself it is usually without danger.
3. By it we certainly can draw off cerebro-spinal fluid.
4. The quantity removed at short sittings has been from one to one and a half ounces in adults.

This, without doubt, represents the amount of free fluid usually present in the lower vertebral canal, even when occluded above.

6. In internal hydrocephalus the relief, if any, is but very temporary. In the common form, due to tubercular meningitis, the result is not worth the trouble, while in the closed or encysted forms it must rather do harm than good.
7. As a diagnostic means, for example in suspected meningeal hemorrhage, it is valuable. As an index of pressure it may also be worth noting.

8. It is worth further trial: (a) as a passing relief in brain tumors not complicated by hydrocephalus; (b) as a substitute for trephining in progressive dementia; (c) in certain spinal troubles; (d) and possibly as a means of applying medication directly to the spinal meninges.

9. In conclusion, it may be said that, while admissible in all cases of brain-pressure, there is as yet no established indication for this procedure except for diagnostic purposes.—*London Med. and Surg. Jour.*

Recovery of Hearing after Twenty-six Years' Deafness.

DR. F. FAULDER WHITE, surgeon to the Coventry Hospital, describes a case of this kind. The patient, aged 85 years, was said to have been deaf from the age of 9 years, and when first seen, heard nothing at either meatus, owing to closure of both Eustachian tubes. Daily politization was instituted, and in one week she heard, at one-half inch, a feebly-ticking watch; in three weeks at three inches; and after three months hearing became normal. The case is recorded as remarkable for the extent of the recovery after so long a period of deafness, and to encourage tentative treatment in apparently confirmed cases of deafness. The mental development has been most marked since hearing has been established. Before treatment she was a good lip reader, and could make use of a limited number of words. Now, after restoration of hearing, she is obliged to learn the alphabet of sound. At first she could not understand many words when spoken slowly. Her education has been greatly neglected.—*British Medical Journal*.

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OBSTETRICS AND GYNECOLOGY.

Extra-Uterine Pregnancy at tenth month: Placenta inserted on Intestine.

HOUZEL describes a case in which the patient was last seen on May 1, 1892. A violent attack of hypogastric pain with dysuria set in early in November. On February 10th, spurious labor set in and lasted four days; a decidua appears to have been passed. On March 15th she remained undelivered and still felt pain; there was fever, but no diarrhoea. The sound passed three inches into the empty uterus. The outline of the child could be very distinctly seen through the parietes. On March 18th 1893, abdominal section was performed. The peritoneum was of a singular green tint. The foetus, slightly macerated, lay immediately underneath; its head was deeply engaged in the left iliac fossa, and mouth deformed from pressure. It had developed in the left tube, and the sac had evidently ruptured during the previous November. The placenta had become attached to the small intestines, and was still free from a retrograde change. The foetus was removed, and the cavity which it had occupied was filled with iodoform gauze. On March 28th the placenta began to separate. There was some constitutional disturbance. On April 5th the last piece came away, and convalescence was thenceforth rapid. The drainage tube was removed at the end of April; the orifice of its track closed in a few days.—*Ann. de Gynec. et d'Obstet.*

Pregnancy after Ligation of the Fallopian Tubes.

At the December meeting of the Glasgow Surgical Society, DR. MURDOCH CAMERON and R. M. BUCHANAN, made a report upon the clinical history and *post mortem* examination of a case where pregnancy occurred after ligation of the tubes.

Two years before this conception the woman had been delivered by Cæsarian section of a healthy mature child. DR. CAMERON tied the tubes at that time. Four days after the last Cæsarian section the patient, who was a dwarf and rachitic, died of peritonitis, and the *post mortem* examination was made by DR. BUCHANAN.

The right fallopian tube showed the constricted portion without any trace of lumen, while the left was perverted throughout, although the canal was much narrowed and the plicatures atrophied and irregular.

Dr. CAMERON said that this was the first case in which he had ever found pregnancy to occur after ligation of the tube, and attributed the fact in this instance to his failure to tie the ligature sufficiently tight. He thought it would be especially dangerous to remove the ovaries at such a time, when the veins were enlarged and sepsis might so easily be introduced, and therefore was accustomed to rely upon ligation of the tubes. In his last case of Cæsarian operation he had taken the precaution of putting on a double ligature, cutting between, and making such a separation that he did not think union could possibly take place.

Dr. HECTOR CAMERON said he would not have thought *a priori* that a silk ligature would have permanently obliterated the fallopian tube. There was no analogy between that and an artery. It is fashionable now-a-days, when tying an artery, not to try to sever the inner and middle coats; but he himself always did try to do so, and when that was done, the reparatory process which followed was almost certain to obliterate the artery at that point. There was no analogy to this in the case of the fallopian tube, and it had always struck him that the method which Dr. MURDOCH CAMERON had described in his last case (double ligature and dividing between) was the right one and ought to ensure success.—*Med. & Surg. Rep.*

Induction of Premature Labour.

HUCKLENBROICH publishes a series of 50 obstetric cases of this class. The condition demanding help was in 48 cases pelvic deformity, in 1 uncontrollable vomiting from cancer of the stomach, and in the remaining case advanced morbus cordis. Only 1 patient was lost: in that case there was placenta prævia and transverse presentation. Turning was required, and a tetanic spasm followed. This was complicated by peritonitis and the patient died on the fifth day. Nine children were stillborn, and 20 died before the tenth day, including most where turning was needed. Twenty-one were reared. Labour was not induced in any case before the thirty-fifth week. A bougie as stout as possible was passed into the uterus. The effect was very varied, labour ending from eighteen hours to eight days after the passage of the bougie. Uterine cramp was frequent; opium was used for its relief. In one instance division of the cervix was found necessary.

Wandering Dermoid Tumor.

AT the December meeting of the New York Surgical Society, Dr. WYETH presented a tumor with the following history: "A week ago a Russian woman, 80 years of age, housewife, entered Mt. Sinai Hospital with symptoms of obstruction and of peritonitis supposed to be due to appendicitis, the region of the vermiform appendix being the seat of greatest pain. Her symptoms dated back six days. On opening the abdomen over the appendix, the peritoneum was found to be very thick, with evidences of old peritonitis, but no inflammation or adhesion of the appendix. On passing the finger towards the median line it came in contact with a mass adherent to the omentum half-way between the umbilicus and pubes. On detaching this, it was found to be a dermoid containing yellow hair and other material.

Wandering dermoid seems to be a rare condition. The patient recovered."—*Annals of Surgery and Medicine.*

Post-Partum Hemorrhage.

TRY, first, external stimulation, then bimanual stimulation. Second, Joe internally and externally; throw ether on abdomen: Third, handkerchief soaked in vinegar squeezed dry at fundus of uterus: Fourth, inject hot water, 180°: Fifth, electricity: Finally, tampon uterus with gauze.

It is rarely one is required to go farther than combined internal and external stimulation. The intra-uterine gauze tampon will always stop hemorrhage, but should never be used except as a last resort.—*Canadian Practitioner.*

PHYSIOLOGY. PATHOLOGY AND BACTERIOLOGY.

The Facial Nerve and Lacrymal Secretion.

IN a recent number of the *Deutsche Medizinische Wochenschrift* Dr. FRANKE of Greifswald makes some remarks with reference to the anatomical, physiological, and experimental evidence regarding the nerve controlling lacrymal secretion. KRAUSE's conclusion that the trigeminus has a decided influence on this secretion, and that the facial also takes some part in its control, is alluded to. The evidence for this, lay in the fact observed by KRAUSE that complete extirpation of the Gasserian ganglion did not cause a complete cessation of tears in the eye on the side on which removal had taken place. Dr. FRANKE is inclined to refer this effect, however, to injury to the greater superficial petrosal nerve. The patient whose case Dr. FRANKE describes showed complete paralysis of the left side of the face with only slight secretion of tears on the affected side, although the trigeminus was intact. His view is that the facial nerve is the nerve of the lacrymal gland, and that disappearance of the secretion is determined by a lesion of the facial nerve either involving the geniculate ganglion or an even more central part.—*Lancet.*

"Moral Pathology."

WE are coming to speak of a modern science of ethics as of some new revelation, and such in a sense it is. In the same way we talk of a new planet. Both, in fact, are ages old, but are now for the first time explained to us by a new interpretation. There need be no surprise, therefore, when we find that many suggestions and assertions made in our own day on the authority of original thought and observation have long ago found expression in other phrases, whether these be the maxims of daily practice, the records of independent reflection, or the accepted doctrine of sacred writings. To explain these truths anew in the language of cause and effect is not, therefore, to teach them for the first time, but to corroborate them by establishing their essential connection with other facts of life. Ethical science thus becomes a reconciler of opinions respecting the natural, and what we have known hitherto as the supernatural. Its teaching goes far to verify the real unity of terms apparently so diverse and to show that the laws of action to which they are related, are often, if not always, virtually identical. Recent literature has repeatedly furnished us with suggestions illustrative of this unity. The processes of biology, social usage, and morality, have again and again been proved to follow similar lines of action, and this resemblance is, perhaps, nowhere better seen than in the parallel changes observed in physical disease and moral disorder. We have before us an interesting contribution to this subject in a handbook on "Moral Pathology" by Dr. ARTHUR E. GILES. In a series of brief chapters he traces the progressive effects and variations of moral evil from its probable origin in some act of bodily indulgence—some "fall" of the man, or rather of the child—through further developments to the more or less complete deformation of character. The analogy between moral wrong-doing and disease is carefully and closely followed throughout, and is described with force and clearness. The moral physician, in order to treat successfully the complex forms of soul sickness with which he has to do, must, as is truly said, be

equally well endowed with insight, sympathy, experience, and the influence of personal example. A chapter on moral diatheses will instruct very many. The right use of egotism as a motor of good actions is worth noting, so also is a chapter on the causation of moral disease. We have been particularly attracted to the observations on selfishness; in opposition to this vice we seem to find the clue, to a perfect reformation. DR. GILES's preference for healthy altruism as a remedy rather than for merely negative self-sacrifice, will commend itself to most readers. It is encouraging to find that even in a study so sombre as moral pathology we are in sight of a hopeful prognosis. Moral death, it is maintained, is unknown to man, though a species of soul coma is not. Recovery is always possible, provided that the will captive to evil be aroused to efforts of release by a stimulus of sufficient power. The remarks on treatment, though necessarily short in a work professing descriptive of disease, are characterised in an eminent degree by friendly wisdom and practical good sense. In particular we may notice three: (1) that careful moral training should begin in childhood; (2) that such instruction should at any age, and as far as possible be individual rather than general; and (3) that in order to succeed it must be sympathetic. Such rational suggestions as the above are of happy augury when we regard them as expressing the active purpose of the new and yet primal science of ethics.—*Lancet*.

The Varieties of Phthisis.

DR. A. F. PICQUE proposes a classification of the various forms of pulmonary phthisis according to the modes of onset. He recognises the following thirteen forms: the common form, the pleuritic, the insidious the febrile, the dyspeptic, diarrhetic, chloro-anemic, denutritive (wasting), catarrhal, croupy nervous, dyspnoic and hæmorrhagic (hæmoptoic). The distinguishing characteristics of each form are described but the above enumeration will sufficiently indicate the basis of classification.

A Contribution to our Knowledge of the Parasite of Variola.

VON SICHERER working at the instigation of Professor BUCHNER, the author, like L. PFEIFFER, A. RUPFER, and JACKSON CLARKE before him, has confirmed observations first made by GUARNIERI, who found that in certain animals the cells of the corneal epithelium, which form the boundaries of a vaccination-wound, always contain intracellular parasites, belonging, like those of malaria, to the sporozoa. These parasites are visible by the end of the second day after vaccination. As seen in the drawing of a hæmatoxylin-stained section, magnified 500 diameters, the parasites appear as small, deeply-stained round bodies, which lie for the most part in the protoplasm of the epithelial cells, close to the nuclei. Around each parasite is a narrow clear space. These bodies cannot be mistaken for leucocytes, for they are present before the latter have reached the injured spot. Thin, fresh slices of the vaccinated cornea, when examined on the warm stage, show the parasites as small, bright bodies moving within their host-cells. GUARNIERI has described a form of sporing similar to that observed in the sporozoa of malaria, namely, sub-division into radial segments. The phenomena have been observed in rabbits, calves and pigs. At the end of the second day after vaccination the line of inoculation shows as a grey streak. At the end of the third day ulceration begins, and extends day by day till the whole of the epithelium has been destroyed, and at every stage every epithelial cell which abuts on the ulcerated surface contains a parasite. Similar parasites are present in small-pox. They are not

observed in simple injuries, burns, or croton-oil lesions of the cornea. L. PFEIFFER has found that if the cornea is painted with cocaine solution previous to vaccination, the inoculation is unsuccessful. This observation is of interest in connection with the mode of treatment of variola suggested by PEPPE in America, viz. the internal administration of cocaine. Like the parasites of malaria and other sporozoa, this parasite of variola has been found to be a *normal* parasite; in other words, it will not multiply in artificial media, but only in suitable living cells and tissues. Hence the difficulty of investigating what connection the parasites may have with the causation of the disease. It is to be remembered that KLEIN and MONCKTON COPEMAN have found a bacillus in vaccine lymph and in small-pox crusts, and they think that this fungus may prove to be the direct causal factor in the disease. The question is one of considerable interest, since it has bearings upon the pathology, still unknown, of the common infective fevers. It remains to be seen whether the protozoa of which VON SICHERER is the latest exponent, or the protophyta of KLEIN and MONCKTON COPEMAN, will in the end gain the credit of causing small-pox. At the present day no one doubts that, whatever the cause may be, it is a parasite, either vegetable or animal.

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PUBLIC AND DOMESTIC HYGIENE AND JURISPRUDENCE.

The Disinfection of Rooms after Infectious Diseases.

THE absolute disinfection and sterilization of a room in which a patient with an acute infectious disease has been treated, is considered at present extremely difficult, if not impossible. We refer, of course, to rooms in ordinary houses which cannot be washed down with large amount of strong antiseptic solutions. The usual procedure of burning quantities of sulphur, of washing the walls and removing all movable pieces of furniture, is considered to be all that is practically possible. DR. G. BARNET has been working, in co-operation with DR. TULLAT, for the purpose of determining whether a better method cannot be found for the disinfection of infected rooms, and he claims to have obtained successful results. The substance which he used is a solution of formaldehyde in alcohol. He has devised an apparatus by which the vapours of this substance are diffused through a room, and he says that with it, he can disinfect with absolute certainty, in six hours three hundred cubic metres of air. Culture of various specific micro-organisms placed in the room are rendered absolutely sterile by this process. The vapours of this formaldehyde have no injurious action upon the furniture of the room, and they disappear rapidly after a few hours of airing. The process suggested, and the apparatus devised, appear to us to be rather expensive, but if they do all that DR. BARNET claims, they will prove a very useful addition to our methods of fighting disease.

The Intercommunication of Human and Animal Diseases.

DR. J. W. ALLAN suggests the formation of institutions where the intercommunicable diseases of man and animals could be practically investigated. There can be no doubt as to the importance of such investigation so far as mankind is concerned, for the human species incurs much more risk of danger from the existence of communicable disorders in animals, than do animals from such affections in human beings. However desirable it may be, to have such investigations thoroughly carried out, there are grave obstacles to be

encountered in founding such establishments, the first and most important, being the provision of money. It is almost certain that the Government will not provide it, and it is to be feared that private benevolence cannot be relied upon to achieve this object. So that it is to be apprehended, we must rely upon the establishments we already possess for the investigation of allied subjects, such as the histological and pathological laboratories of the medical and veterinary schools, and special foundations like that of the British Institute of Preventive Medicine to afford opportunities for learning more of these transmissible diseases. There are not many labourers in this field, both in this country and abroad, and it must not be forgotten that the Local Government Board, has for many years past, spent considerable sums of money in the investigation of those disorders of animals which can be conveyed to man. With regard to the suppression of these diseases, it has also to be remembered that medical opinion is, at least as regards some of them—rabies and glanders for instance—ahead of public and legislative opinion.—*British Medical Journal*.

To Practice Deep Breathing.

STAND erect, the feet separated, the right slightly in advance; shoulders and head in natural position; hands lying lightly on the abdomen, the fingers pointing to the umbilicus—compliance with this rule enables the person to use the abdominal as well as the pectoral muscles in respiration. Empty the lungs of air, then close the mouth, inhale slowly through the nostrils, using abdominal as well as chest muscles—the lungs thus receive the utmost possible amount of pure oxygen, and the muscles have exercise. Hold the breath as long as possible, and meanwhile use the ordinary calisthenic exercises—never exercise except the chest is well expanded with air. Exhale slowly, enunciating the bowel sounds as the air passes the lips.—*Annals of Hygiene*.

Late Suppers.

THE old tradition that to eat anything just before going to bed was sure to produce indigestion, and render sleep impossible, is now happily exploded. It is not good, as a matter of fact, to go to bed with the stomach so loaded that the undigested food will render one restless; but something of a light, palatable nature in the stomach is one of the best aids to quietude and rest. The process of digestion goes on in sleep with as much regularity, as when one is taking violent exercise to aid it, and so something in the stomach is a very desirable condition for the night's rest. Some physicians have declared indeed, that a good deal of the prevalent insomnia is the result of an unconscious craving of the stomach for food in persons who have been unduly frightened by the opinion that they must not eat before going to bed, or who have, like many nervous women, been keeping themselves in a state of semi-starvation.

Nothing is more agreeable on retiring for the night than to take a bowl of hot broth, like oatmeal, gruel or clam soup. It is a positive aid to nervous people, and induces peaceful slumbers. This is especially the case of cold winter nights, when the stomach craves warmth as much as any other part of the body. Even a glass of hot milk is grateful to the palate on such occasions, but a light, well cooked gruel is better, and in our climate, during the cold months of winter, should be the retiring food of every woman who feels, as many do, the need of food at night.—*Canada Lancet*.

Shame.

MR. WILLIAM BENJAMIN DAVIES has recently been fined £25 for infringing the Medical Act, by falsely taking and using the title of a surgeon. According to his solicitor, Mr.

DAVIES had gone through the usual medical training up to the final examination, from which he withdrew, so it is quite possible that his medical knowledge was fairly good. But he represented himself as being what he was not, and richly deserved his punishment. His offence is only too common now-a-days in every department of trade. You ask for bread and butter and get presumably bread—though no one has yet defined what bread is—and certainly margarine. It is fair to state that in a recent case the purchaser was told beforehand by the vendor that he would get margarine. Ground coffee is openly sold as a mixture of chicory and coffee. It is useless to say most people like it so—ninety-nine out of a hundred English people do not know what coffee is. In an evening contemporary was recently printed a prize menu for two people to last a week; among other items was a quarter of a pound of coffee price 4d. Conceive the infusion made from four ounces of coffee at 1s. 4d. a pound to last two people a week; but this kind of wash is the average housewife's notion of coffee. A return to the methods of our ancestors—the quack paraded through Cheapside within collar of "jordans" round his neck, the adulterator, whether wholesale or retail, in the pillory at Charing-cross, with his falsely named goods at his feet—would go a long way towards purifying money-getting and preventing robbery. An even more stringent punishment than there is on record, the case being that of a falsifier of wine, who being compelled to drink some of his product, died. Perhaps if this was carried out in every case, the effects would be too uniformly fatal, but the suggestion is one to be borne in mind.—*Lancet*.

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THERAPEUTICS AND PHARMACOLOGY.

The Effect of the Local Application of Guaiacol in the Reduction of the Temperature in Typhoid Fever.

MCCORMICK has written a paper on this subject, and, in summing up the article, says he is convinced of the following facts:—

- (1). That guaiacol when locally applied is certain to reduce temperature.
- (2). That with the care that a physician should always use in the administration of drugs, it is absolutely safe.
- (3). That chills will not occur if the temperature is not reduced below 100°F.
- (4). That no deleterious effect is produced upon any of the organs by its use.
- (5). That it is easy to apply, and can be used by any one competent to nurse a typhoid fever case.
- (6). There are no depressing effects following an intelligent use of the drug.
- (7). That by continued use the dose can be gradually lessened.
- (8). That it is far superior to the cold bath; that it can be used by one person; that no appliances are necessary for its use that are not obtainable in every home; that it is much more pleasant to the patient; that it is fully as effective; that patients are not subjected to the danger of moving, and they offer no resistance to its use.

MCCORMICK has thoroughly tried the bath and cold packs, and knows that they have proved very efficacious in many cases, but since his experience with guaiacol has no desire to return to either of them.—*Therapeutic Gazette*.

Walking Backward Cure for Headache.

AN apostle of physical culture says that an excellent and never-failing cure for nervous headache is the simple act of walking backward. Ten minutes is as long as is usually

necessary to promenade. It sometimes, however, requires more than ten minutes to walk at all, if one is very "nervous." But it is not understood that it is necessary to walk a chalkline. Any kind of walking will do, provided it is backward. It is well to get in a long, narrow room, where the windows are high, and walk very slowly, placing first the ball of the foot on the floor, and then the heel. Besides curing the headache, this exercise promotes a graceful carriage. A half hour's walk backward every day will do wonders towards producing a graceful gait.

Ichthyol in Fissures of the Anus.

VAN DER WILLIGEN warmly commends ichthyol in the treatment of fissures of the anus. The pure drug is introduced into the anus by a brush. The contraction of the sphincter forces this into all the folds of the mucous membranes. Little pain is excited. Treatment should be repeated daily. The patient is given liquid diet, and occasionally castor oil. The first patient, who had previously been treated by every means short of operation, was cured in eight days, the other three in two or three weeks. One had already been subjected to operation without benefit. There was no recurrence.—*Therapeutische Gazette*.

Onions in Therapeutics.

DOCTOR STAWSKI experimented for several days upon eight healthy persons in order to determine the effect of onions. About two ounces of the raw vescent were administered each day, along with mixed diet. The result gave no support to the claim that onions promote either diuresis or diaphoresis. In five of the eight cases there was increased body-weight. Appetite, thirst, eructation, peristalsis, and bodily vigor were augmented, the latter however followed by a temporary inclination to somnolence. In general the faeces were made more soft, increased in quantity, and more easily evacuated.—*Medical Standard*.

Otalgia.

R. Choral-camphor ... 5 parts
Glycerin ... 30
Ol. Amygdal. Dulc ... 10 "

Insert a piece of cotton wool, on which some of the above solution has been dropped, in the affected ear.—*Med. and Surg. Reporter*.

Gilbert's Pills for Syphilis.

R. Hydrarg. biniodid ... gr. iss.
Potass. iodid ... gr. lxxx.
Gum. acac ... gr. viij.
Mellis q. s. ut. f. pilul. ... No xx.

M. Sig.—Two pills every morning.—HUGO ENGEL, M.D. Philadelphia, Pa., in *Medical Summary*.

A mouth-wash.

R. Acid. salicylic ... grs. xv
Chloroform ... 3ij
Tinct. Benzoin ... 3ij
Tinct. Myrrhæ ... 3ij
Alcohol ... 3iv

Ft. Lotic. S. A few drops in a wine-glass of water.—*PROF. LOOMIS*.

Chronic Diarrhæa and Dysentery.

R. Cupri sulphat.
Morphiæ sulphat ... aa gr. i
Quinise sulphat ... gr. xxiv

M. ft. pil. No. XII.

Sig.: One pill three times a day.

Squibb's Cholera Mixture.

R. Tinct. opii
Tinct. capsicd
Spts. camphore ... aa fl. ʒi
Chloroform ... fl. ʒiii
Alcoholis ... q. s. ad fl. ʒiv

M. Dose.—Twenty to forty minims.

Correspondence.

AN INDEPENDENT MEDICAL COLLEGE IN CALCUTTA.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—As you and many other European and Indian physicians well know, a scheme for the development and establishing of an independent College of Physicians and Surgeons in India has been before us for some time. Such a measure has often been suggested in the columns of the *Indian Medical Record*, and within the past few months, several earnest men have given the matter their best thought and consideration.

The deliberations of these men, who formed themselves into a Special Committee, are worthy of the consideration of the medical profession at large in India, and I therefore, with their permission, beg that the following scheme may be placed before the Council of the Indian Medical Association and set forth and published in the *Indian Medical Record*, in view to its receiving the needful deliberation that it demands from the profession at large, and in Calcutta in particular, before final action is taken.

CALCUTTA, 19th Nov. 1895. Yours, &c., GEO. POGGIE, M.D.

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SCHEDULE FOR THE FORMATION OF THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CALCUTTA.

OBJECTS.

1. To found and develop a medical college, established and maintained by private effort, and conducted on the lines of the British Schools of Medicine.
2. To establish a Hospital and an Out-door Dispensary in connection with the Medical School, for clinical tuition in all its branches.
3. To provide a liberal and practical medical education, of a high standard, to European, Anglo-Indian, and Indian youths.
4. To grant passports for the practice of medicine to fully trained and qualified persons.
5. To open the way to educational work and hospital appointments for independent physicians in India.
6. By the above or other legitimate means, to encourage self-help and promote original research, and thus advance the status of non-official physicians and surgeons, by affording them the means of special study and scientific advancement.

CONSTITUTION.

1. The College to be designated "THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CALCUTTA," and to be supported by donations from the general public; also by fees paid by its students and diplomates.
2. The Staff of the College to be formed of Senior and Joint-Professors and of Senior and Junior Demonstrators and Tutors. The Senior and Joint-Professors shall form the Faculty of the College.
3. The College shall be governed by its Faculty who shall elect their own President and Executive Council from among members of the Faculty.
4. The Faculty shall from time to time, frame the Rules and Bye-laws of the College, and administer its affairs generally.

5. The power of granting Diplomas to practice Medicine, Surgery and Midwifery, to persons who have had a complete medical education, and have passed successful examinations, according to the rules of the College, shall be vested in the Faculty.

6. The Diploma to practice Medicine, Surgery and Midwifery, granted by the College shall be styled the "Licentiate of the Royal College of Physicians and Surgeons of Calcutta." It shall also grant a higher Diploma or "Fellowship" under special terms of examination and fees.

7. The preliminary educational test and curriculum of study shall be in strict accordance with the rules laid down by the General Medical Council of Great Britain.

8. *Registration*—Every candidate entering upon the course of study of this College, on production of a certificate of having passed the Preliminary Educational Examination of this College, or a certificate of some other equivalent test, as hereinafter notified, together with a certificate of good character, shall be registered on the rolls of the College as a medical student.

9. The Preliminary Educational Test shall be held quarterly in March, June, September and December, and shall consist of :—

- Physics.
- Arithmetic.
- Algebra.
- Euclid.
- English.
- Latin.
- French, or some Oriental language.

10. The Course of Education of the College shall be for five years and shall embrace the following subjects :—

- (a). Physics, including elementary mechanics of solids and fluids and the rudiments of heat, light and electricity.
- (b). Chemistry, including principles and details which bear on the study of medicine.
- (c). Botany, bearing on Materia Medica.
- (d). Elementary Biology.
- (e). Anatomy, Descriptive and Surgical.
- (f). Physiology and Histology.
- (g). Materia Medica and Pharmacy.
- (h). Pathology.
- (i). Therapeutics.
- (j). Medicine and Clinical Medicine.
- (k). Surgery, including Surgical Anatomy and Operative and Clinical Surgery.
- (l). Obstetrics and Gynaecology, including the Diseases of Children.
- (m). Ophthalmic Medicine and Surgery.
- (n). Forensic Medicine.
- (o). Hygiene and Vaccination.
- (p). Mental Diseases.

11. The Professional Examinations of the College shall be divided into five parts, as follows :—

- First*:—At the end of the first year of study in :—
- Physics.
 - Chemistry (Inorganic).
 - Botany.
 - Practical Pharmacy.
 - General Outlines of Anatomy and Osteology.

Second:—At the end of the second year of study in :—

- Chemistry (Organic).
- Practical Chemistry.
- Physiology and Histology.
- Anatomy (complete).
- Materia Medica and Pharmacology.

Third:—At the end of the third year of study in :—

- Materia Medica and Therapeutics.
- Pathology.
- Hygiene.
- Medicine.
- Surgery.

Fourth:—At the end of the fourth year of study in :—

- Ophthalmic Medicine and Surgery.
- Pathology.
- Jurisprudence.
- Obstetrics and Gynaecology.
- Medicine.
- Surgery.

Fifth or final for the Diploma in :—

1. Medicine (clinical).
2. Surgery (clinical and operative).
3. Obstetrics and Gynaecology (Clinical and Operative).
4. Therapeutics.
5. Mental Diseases.
6. Public Health and Vaccination.

Special Examinations for the Diploma of the College for senior students, undergraduates and others who have completed their studies in other medical schools and colleges, will be held quarterly in March, June, September and December.

Students of this College who have failed at the regular yearly examination of the College will be permitted to appear at special quarterly examinations in such subjects as they have been reverted for a fixed period.

12. *Exemption from Preliminary and Junior Professional Examinations.*

(a) A candidate presenting a certificate of having passed the Entrance Examination of any Indian University, or other recognized equivalent test—as accepted by the General Medical Council of Great Britain—or of the High or Middle School Examinations of India, shall be exempted from passing the Preliminary Examination of this College.

(b). All persons holding British or Foreign Diplomas to practice Medicine, may obtain the Diploma of this College by passing the Final Examination and paying the fees for the said examination and for Registration of Diploma.

(c). All graduates of Indian Universities may obtain the Diploma of this College under the terms of para. (b).

(d). All undergraduates of recognised universities who have attended a complete five years' course of medical study, may be admitted to the last two examinations on payment of the special fees thereof and for registration.

(e). All Military Assistant Surgeons holding Certificates or Diplomas from the Medical Colleges of Calcutta, Madras, and Bombay, who have had five years' medical practice in British Military Hospitals, will be admitted to the Final Examination on the above terms.

(f). All Hospital Assistants holding the Certificates of Indian Medical Schools, who have ten years' service, and who shall pass the Preliminary Examination of this Col-

lege, shall be admitted to the last two examinations, on payment of fees for the same, and for Registration of Diploma.

(g) Medical Students of Indian Universities and Schools are eligible to appear at the examinations for the Diploma of this College, on production of evidence of having attended the necessary courses of instruction of any recognised Indian School with a complete curriculum.

13. *The fees of the College* shall be as follows :—

| | |
|------------------------------------------------|------------|
| Preliminary examination | ... Rs. 15 |
| Tuition (per annum in advance) | „ 60 |
| Examination (for each) | ... „ 10 |
| Final Examination for Diploma and Registration | ... „ 50 |

Regular students of this College, who do not complete their course of study, and who desire to continue their studies or to qualify elsewhere, may receive Certificates of attendance at lectures and other courses on payment of fifty rupees for each course. In calculating the amount due for these Certificates, the payments made for tuition in the College will be deducted.

14. *The Special Fees* for students, undergraduates, graduates, and diplomates of other schools, or other persons who, by the rules of the College shall be considered eligible for the examinations for the Diploma of this College, shall be as follows:—

| | |
|-------------------------------------------------------------|------------|
| Entrance Fee | ... Rs. 25 |
| Junior Professional Examinations including 1st, 2nd and 3rd | ... 50 |
| Senior or 4th Examination | ... 100 |
| Final Examination and for Registration of Diploma | ... 150 |

THE MALARIAL PARASITE.

TO THE EDITOR, "INDIAN MEDICAL RECORD."

SIR,—Will you or any of your readers kindly inform us, through your esteemed journal, the results of the experiments performed at Hyderabad by Dr. LAWRIE and others on malaria, which appeared in some "lay papers," and was in no part given publicity to in the *Record*. These experiments, "the papers say," led Dr. LAWRIE to demonstrate that the micro-organisms, discovered by LAVERAN and other Italian observers, attributed to be the cause of malaria, were not real micro-organisms, but mere nuclei of white blood cells, altered by the degenerative effects of the disease; and that the supposed presence of the so-called "germs of malaria" under the microscope being no other than the colored nuclei resulting from the staining imparted to that part of the cell. This seems to be a new departure from the present path of the etiology and pathology of the disease. I would earnestly enquire what the "malaria-parasite party" has to say on this, and how, and in what light, do the eagle-headed Americans and professors at home look at this discovery. I do not for a moment doubt that there are many who support the parasitic theory of the disease, yet there may be some who also criticise it. Anyhow, anything that comes from such a man as Dr. LAWRIE, who is already reputed to be an earnest seeker after truth, must have its due consideration.

Yours &c., R. YELLISH NIDU, G.H.M.S.

ELLICHPUR, 16th November 1895.

(We have not yet seen the account of Dr. Edward Lawrie's researches in lay professional paper, and what has appeared in the lay press cannot be accepted as authentic, for, it does not bear the stamp of the author's sanction for its publication. Comments on such reports as have found their way into the lay press, are seen in some of the English medical papers, but obviously these comments are of no weight since Dr. Lawrie has not yet declared his views.)—ED., J. M. R.

REVIEWS.

THE DISEASES OF CHILDREN'S TEETH: their prevention and treatment. A manual for medical practitioners and students. By R. DENISON PEDLEY MITK, L.D.S., Eng., F.R.C.S., Edin., Dental Surgeon to the Evelina Hospital for Sick Children, Southwark, London, 8vo., pp. 268, clearly indexed and copiously illustrated. (Publishers: J. P. SAGE, London, and S. S. WHITE, Dental Manufacturing Co., Philadelphia, Pa, 1895.)

Pleading for the supplementary of theory with a practical course in dentistry, and urging upon the general medical practitioner the necessity for acquiring an accurate knowledge of dental disorders, which may be reflex as the result of some departure from the normal performance of the functions of nutrition, or direct as the result of decay and give rise to reflex lesions of a grave character in many localities where there are hundreds of children but no dentist. Dividing his subject into eight sections, to each of which he exclusively devotes one chapter, the author first describes the structure of the teeth and then carrying us on through the eruptive stages shows us how caries springs up, but may be prevented or its ill effects removed. He calls particular attention to the careful hygiene of the mouth, and showing how absolutely dependant the general medical practitioner, and the dentist are on each other for mutual support, and successful results, points out that in many instances an aching tooth may be relieved by abdominal medication, while many reflex diseases that threaten the patient's life may be effectually treated only by lancing the gum, or removing the tooth or decay, that acting as a foreign substance is doing all the damage, as all the medicine in creation would be useless in these latter cases. He believes in palliative treatment, but at the same time inveighs seriously against drugs containing salts of mercury. Next taking us over the internal structure of the tooth and showing its intimate connection with the nervous, arterial, venous and osseous systems of the entire animal economy, treats of the various diseases to which *Dens* is heir, and how they may be averted or cured, and then when all other means have failed or are impracticable, he teaches in eloquent language *how* to "fill" hollows, remove teeth and their stumps and take "impressions" of the mouth, so that art may furnish what nature has decided to destroy.

He cites a copious bibliography of renowned authors, and to fully explain how diagnoses may be made, shows the mutual dependance of the medical man and dentist on each other, embodies in their proper places extracts from his case book of the symptoms presented, the diagnosis arrived at, and the treatment adopted in a large number of instances.

THE METHODICAL EXAMINATION OF THE EYE, being Part I of a guide to the practice of Ophthalmology for students and practitioners. By WILLIAM LONG, F.R.C.S., Eng., Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and Surgeon to, and Lecturer on Ophthalmology at the Middlesex Hospital. Crown 8vo., 98 pp., illustrated with numerous wood-cuts. (Publishers, LONGMANS GREEN and Co. London and New York, 1895.)

Part II has not yet reached us; but if it be anything like part I, it will be a book really worth having in the

Surgeon's library. In 96 pages of clear bold type the author devises a routine method by which the student may study the affections of the eye and learn to so accurately examine each case as to render erroneous diagnosis or unwarranted operations an utter impossibility. Dividing the examination of the eye into three stages: (1) external, (2) the visual, and (3) the ophthalmoscopic. Mr. Long carefully guides the student or reader from the *alpha* of anatomical structure to the *omega* decision as to what really ails the eye of the patients; but does it in so concise and compact a manner that while he does not crowd the student with too much to remember nor terrify him, as some authors do by laborious, lengthy and soporific detail of description, he succeeds in teaching in few words *everything* that the eye-student requires to be taught and furnishes him with a *handy* book of reference when memory flags, or he may be in doubt as to what he should do.

The work is thoroughly up-to-date, and the illustrations, which the author tells us were drawn from photographs taken by Mr. D. MARSHALL, the curator at Moorfields, are extremely well chosen to explain the various details of "Manipulation" on which depends at least half of the ophthalmic Surgeon's skill and professional reputation in the treatment of the eye, which is the most delicate organ in the whole body, and requires very tender handling, lest a trifle of undue pressure or the most trivial carelessness may send a patient blind for the remainder of his or her lifetime.

Government Medical Gazettes.

GOVERNMENT OF INDIA.*

The following promotions are made, subject to Her Majesty's approval:—

To be Surgn.-Capt.—P. B. Haig, L. W. A. Fullerton, R. H. Maddox, E. V. Hago, M.D., H. G. Melville, A. O. Hubbard, C. G. B. Scott, H. A. Smith, D. R. Green, G. McI. O. Smith, H. M. Earle, J. G. Hulbert, P. C. Gabbett, J. L. Macre, T. E. Swinton, S. H. Burnett and T. Jackson from 27th July 1895.

To be Hony. Surgn.-Capt.—S. E. Carraplett, from 30th Augt. 1895.

To be Hony. Surgn.-Lieut.—T. Baptist from 23rd Augt. 1895; H. Tallent from 30th Augt. 1895.

The Queen has approved of the retirement of the under-mentioned officers:—

Bde.-Surgn.-Lieut.-Col. A. Barry, M.D., from 31st Augt. 1895.

Hony.-Surgn.-Capt. J. Hamilton from, 15th June 1895, and G. A. Hottinger from 8th July 1895.

Extraordinary leave for 12 months without allowance, is granted to Civil Asst. Surgn. R. Bryson from 21st Jan'y. 1895.

Surgn.-Capt. A. Street, M.B., F.R.C.S., I. M. S., is placed at the temp'y. disposal of the Bombay Govt.

BENGAL GOVERNMENT.†

Leave of absence is sanctioned as under:—Asst. Surgn. Khagendra Nath Sen, 6 months *w.o.* from 12th Oct. 1895.

The following officers are apptd. to do superny. or genl. duty at the Presidency Genl. Hosp., Calcutta:—Surgn.-Capt. F. F. Maynard from 25th Nov. 1895; B. C. Oldham from 22nd Oct. to 4th Nov. 1895; Mil'y. Asst. Surgns. G. R. Hains from 19th

Nov. 1895; W. Clarke from 29th Oct. 1895; Asst. Surgn. Harendra Nath Ghosh from 23rd Nov. 1895.

Medical charge was received as under:—Surgn.-Maj. F. S. Peck of Civil Surgn., Muzaffarpur from 18th Nov. 1895; Surgn.-Capt. R. Bird of Bankura Intermediate Jail on 18th Nov. 1895.

Med. charge was made over as under:—Dr. Umesh Chunder Mookerji, of Bankura Intermediate Jail, on 18th Nov. 1895.

The following appts. and postings are ordered:—Surgn.-Maj. F. S. Peck to be Civil Surgn., Muzaffarpur, from date he assumes charge.

Surgn.-Capt. B. H. Deare to offg. Dy. Sany. Commr., Metropolitan and Eastern Bengal circles, from date he assumes charge; T. Grainger at temp'y. disposal of Insp.-Genl. of Jails.

Mily. Asst. Surgn. W. Clarke to Offg. Med. Offr., Sandheads, from date he assumes charge; C. R. W. Banoroff of Med. Offr. Kanchrapara E. B. Ry., from 1st to 13th Nov. 1895; V. M. Carleton to be Med. Offr. Kanchrapara, E. B. Ry. from 18th Nov. 1895.

Asst. Surgns. Monindra Lal Mitter, supny. duty Med. Coll. Hosp., from 25th Nov. 1895; Norendra Nath Gupta to civil med. charge of Puri, from 18th Nov. 1895.

PUNJAB GOVERNMENT.*

Leave has been sanctioned as under:—Surgn.-Capt. A. Buist-Sparks 25 days *p. l.* from 4th Nov. 1895; Asst.-Surgn. Radha Kishen, 2 months *p. a.*, from 5th Nov. 1895; First Class Hosp. Asst. Sant Ram, 45 days *p. l.* from 5th Nov. 1895; Second Class Hosp. Asst. Wazir Chand, 3 months *p. l.*, from 8th Nov. 1895; Third Class Hosp. Asst. Rahmat-ulla 1 month *p. l.*, from 14th Nov. 1895.

Medical charge was assumed as under:—

Surgn.-Lieut.-Col. T. E. L. Bate of Insp.-Genl. of Prisons, Punjab; Surgn.-Major M. O'Dwyer of Supdt., Jullundur Jail, on 16th October 1895; Surgn.-Capt. J. K. Close of civil med. duties, Jhelum on 4th Nov. 1895; H. Fooks of Supdt. Bannu Jail, on 16th Oct. 1895; D. M. Davidson of Supdt., Gurdaspur Jail, on 18th Oct. 1895; C. H. James of Dy. Sany. Commr., Punjab, on 12th Oct. 1895; Surgn.-Lieut. T. A. Granger of civil med. duties, Kurram, on 1st Nov. 1895; R. Heard of civil med. duties, Mardan, on 8th Oct. 1895; Mily. Asst. Surgn. J. T. Weston of civil med. duties, Hissar Dist., on 10th Oct. 1895; Asst.-Surgns. Rai Bahadur Thakor Das of Civil Surgn., Ferozpur, on 4th Nov. 1895; Chetan Shah of Supdt. Ludhiana Jail, on 19th Oct. 1895; Narain Singh of Sr. House Surgn. Med. Hosp., Lahore on 3rd Nov. 1895; Harbhagwan Das of Chakwal Disp., Jhelum Dist., on 27th Oct. 1895; Sodhi Karam Singh of Gurdaspur Civil Hosp. on 5th Nov. 1895; First Class Hosp. Asst. Agia Ram of Ghaspur Disp. on 14th Oct. 1895; Abdul Rahman of N. W. Ry., Amritsar, on 31st Oct. 1895; Zulfiqar of Shabkadr Disp., Peshawar Dist., on 31st Oct. 1895; Second Class Hosp. Asst. Abbas Ali Shah of Tangi Disp., Peshawar Dist., on 27th Oct. 1895; Third Class Hosp. Asst. Ditta Ram of Jowala Mukhi Disp., Kaiyra Dist., on 5th Nov. 1895; Sheikh Ahmed of Sambria Disp., Sialkot Dist., on 8th Nov. 1895; Amir Khan of N. W. Ry., Lahore, on 14th Nov. 1895; Lahooria Ram of Midh Disp., Shahpur Dist., on 28th Oct. 1895; Amir Khan of genl. duty, Mardan, on 27th Oct. 1895; Akbar Khan of Narot Disp., Gurdaspur Dist., on 10th Oct. 1895.

Charge was relinquished as under:—

Surgns.-Maj. S. F. Bigger of Supdt. Bannu Jail on 18th Oct. 1895; G. W. P. Denny of Insp.-Genl. of Punjab Prison on 7th Nov. 1895; M. O'Dwyer of Dy. Sany. Commr., Punjab, on 7th Oct. 1895; Surgn.-Capt. A. J. Macnab of civil med. duties, Mardan, on 8th Oct. 1895; C. Duer of civil med. duties, Kurram, on 1st Nov. 1895; A. Buist-Sparks of Civil Surgn. Ferozapore on 4th Nov. 1895; W. E. E. Woodwright of civil med. duties, Jhelum, on 4th Nov. 1895; Asst.-Surgns. Sopha Ram of Supdt. Jullundur Jail on 16th Oct. 1895; Radha Kishen of Supdt. Gurdaspur Jail on 18th Oct. 1895; Brij Lal of Supdt. Ludhiana Jail on 19th Oct. 1895; Fateeh Chand of civil med. duties, Hissar Dist., on 10th Oct. 1895; Radha Kishen of Gurdaspur Civil Hosp. on 5th Nov. 1895; First class Hosp.-Asst. Sant Ram of Jowala Mukhi Disp., Kaiyara Dist., on 5th Nov. 1895; Agia Ram of Saksear Disp.,

* Corrected up to end of the 23rd November 1895.

† Corrected up to end of the 27th November 1895.

* Corrected up to be for the 31st November 1895.

Shahpur Dist., 14th Oct. 1895; Second Class Hosp.-Asst. Wasir Chand of Sambria Dispy., Sialkot Dist., on 8th Nov. 1895; Sachet Singh of N.-W. Ry., Amritsar, on 31st Oct. 1895; Third class Hosp.-Asst. Rahmat-ullah of N. W. Ry., Lahore, on 14th Nov. 1895; Jowahir Mal of med. dispy., Shahpur, Dist., on 28th Oct. 1895; Lahoria Ram of Sholkh Budin Dispy., Dehra Ismail Khan Dist., on 28th Oct. 1895; Amir Khan of Tangi Dispy., Peshwar Dist., on 27th Oct. 1895; Sheikh Ahmad of Shahkade Dispy., Peshawar Dist., on 31st Oct. 1895; Maula Bakah of Narot Dispy., Gurdaspur Dist., on 10th Oct. 1895.

MADRAS GOVERNMENT.*

The following promotions are made:—To be Senr. Hospl. Asste.—C. Francis from 1st Feb. 1895; S. Francis from 8th March 1895; M. Kupusawmi from 21st March 1895.

The following appointments are notified:—Surgn. Lieut.-Col. Hackett Wilkins to be Med., and Sany. Offr. Malabar Dist. Board.

Surgn. Maj. S. C. Sarkies to act as Civil Surgn., Cocanada, from 6th Nov. 1895.

BOMBAY GOVERNMENT.†

The following officers received charge:—Surgn. Lieut.-Col. J. McCloghy, F.R.C.S.I., of Rajkot Prison, on 3rd Nov. 1895.

Surgn.-Capt. W. E. Jennings, M.B., C.M., of Health officer of the Port of Bombay on 7th Nov. 1895.

The following officers made over charge:—Surgn.-Maj. F. F. MacCartie, M.B. Health officer, of the Port of Bombay on 7th Nov. 1895.

Surgn.-Capt. W. E. Jennings, M.B., C.M. of Rajkot Prison on 3rd Nov. 1895.

CENTRAL PROVINCES GOVERNMENT.‡

Leave of absence is sanctioned as under:—

Surgn. Capt. S. A. C. Dallas, 3 months *p.l.* from 4th Augt. 1895.

First Class Hospl. Asst. Pransukh, 3 months *p.l.* from available date.

Second Class Hosp. Asst. Khalilur Rahman, 3 months *p.l.* from available date; Havendra Chundra Ganguli 45 days *p.l.* from available date.

Third Class Hospl. Asst. Madhu Sudan Das, 8 days extension of *p.l.*; Girdhari Lal, 3 months *p.l.* from available date; Ganesh Sitaram 2 months *p.l.* from available date.

The following are directed to do duty under the Civil Surgns. of the dists. bracketed against their names:—

Asst. Surgns. Malhar Narayan Korde, Mrigendra Lal Mittra and Lakshmi Narain Chaudhri (Nagpur); First Class Hospl. Asst. Din Mahomed (Nagpur); Third Class Hospl. Asst. Ram Krishna Lal. (Hoshangabad); Bappu Mudho (Rarpur); Khataj Singh, (Balaghat and then Nagpur).

The following appointments and transfers are ordered:—

Surgns.-Capt. S. A. C. Dallas resumed charge of Chanda Jail and District; A. G. Hendley to medical charge Balaghat Dist. and of Balaghat Jail.

Asst. Surgns. Malhar Narayan Korde on Vaccination duty, Nagpur Dist.; Gandamal on Vaccination duty, Jabulpur Dist.

First Class Hospl. Asst. Mahomed Haniff to Powni Br. Dispy., Bhandara Dist.; Hushmet Ali to Central Jail Hospl., Raipur; Wahiduddin to Main Dispy., Bilaspur.

Second Class Hospl. Asst. Ram Sahai Lal to Gonda Br. Dispy., Bhandara Dist.

Third Class Hospl. Asst. Bhagwan Din to Tirora Br. Dispy. Rama Shraya Jagannath Dube to Worora; Br. Dispy. Chanda Dist.; Mahomed Siddik to Jail and Police Hospl. Hoshangabad, Suraj Pershad Tiwari to Bargah Br. Dispy. Sambalpur Dist.; Vijay Shankar to Jail and Police Hospl., Seoni; Ramkrishna Lal to Mital Br. Dispy. Betul Dist.; Devendra Nath Banarji to main Dispy. Betul.

*Corrected up to and for the 12th November 1895.

†Corrected up to and for the 14th November 1895.

‡Corrected up to and for the 23rd November 1895.

N.-W. P. AND OUDH GOVERNMENT.*

Leave of absence is sanctioned as under:—Milly. Asst. Surgn. C. A. Farmer, 30 days *p.l.* from 1st Nov. 1895; Asst. Surgn. Saraju Kumar Mukerji, 35 days *p.l.* from 11th Nov. 1895.

The following transfers and appointments are ordered:—Surgn.-Capt. J. Chaytor White as superny. Civil Surgn. Jaunpur Dist.; H. B. Melville as superny. Civil Surgn., Mainpuri Dist.

Asst. Surgns. Purna Chandra Mukerji to charge of Lalitpur Dispy.; Jhansi Dist. Ram Charu to Kashipur Dispy., Nainital Dist.

First grade Hospl. Asst. Shaikh Subban to charge of Ori Sadar Dispy.

ASSAM GOVERNMENT.†

The following medical charge are ordered:—First grade Hospl. Asst. Pratap Chandra Bose of Chief Commissioner's Staff at Shillong from 16th Nov. 1895.

Third grade Hospl. Asst. Kailas Chandra Das II, of Jalugati Dispy., Nowgong Dist., on 10th Oct. 1895; Kumudini Kanta Chakravarti of Jazi Dispy., Nowgong Dist. on 12th Oct. 1895; Chandra Kisor De of the Assam Burma Connection Railway Survey Party on 23rd Oct. 1895.

DOMESTIC OCCURRENCES.

The charge for inserting a Domestic Occurrence is Re. 1 for subscribers and Re. 2 for non-subscribers, which should be forwarded in stamps with the announcement.

BIRTHS.

WEIR.—November 6, Fatehgarh, the wife of Surgeon-Major R. R. Weir, I. M. S., of a son.

McNAUGHT.—November 5th, at Deolali, the wife of Surgeon Captain J. G. McNaught, M.D., Army Medical Staff, of a daughter (still born).

BOLSTER.—At Subathn, on the 14th November, 1895, the wife of Surgeon-Major Bolster, A. M. S., of a son.

MARRIAGES.

BUIST-SPARKS—WHITLEY.—At St. Paul's Cathedral, Ranchi, on the 6th November, by the father of the bride, assisted by the Rev. F. C. Boyd, Arthur Buist-Sparks, Surgeon-Captain, Indian Medical Service, to Florence May Whitley, youngest daughter of the Right Rev. the Bishop of Chota Nagpur. Scotch and English papers please copy.

MAWHINNY—PARKIN.—Oct. 28th, at the Church of the Holy Trinity, Murree, Punjab, Surgeon-Captain R. T. W. Mawhinny, A. M. S., to Elizabeth Parkin Dell, Murree.

DEATH.

KIRK.—On the 3rd November, at Stratford, Elizabeth, widow of Rupert Kirk, Surgeon, 2nd Light Cavalry, Rajkote, India, aged 89.

NOTICES TO CORRESPONDENTS.

HINTS TO CONTRIBUTORS.

1. Write plainly and briefly and to the point. 2. Write on one side of the paper only. 3. Save postage by sending your papers by "Book Post," the wrapper having its sides open. 4. Every member of the Profession in India should do his little share in adding to the general stock of knowledge.

*Corrected up to and for the 18th November 1895.

†Corrected up to and for the 23rd November 1895.

of tropical disease. 5. Write up interesting cases or a series of cases, give statistics bearing on the history, causation, prevention and treatment of disease. 6. Bear in mind that this Journal is a channel of communication between the members of our profession in the East; therefore send "Personal and General News items," and they will be recorded. 7. Write your views on socio-political topics, connected with the profession, official and non-official, in order to advance the interests of all sections of our calling. 8. Newspapers and journals sent for notice should have the parts intended for observation marked.

G. W. B. and others.—The Association Certificates will issue shortly. They are now being signed by the Council.

R. B.—The College of Physicians of London gets the *Record* and Dr. Hallet will see our note on the mistake he has made.

W. A. W. (Jalpaigori).—The matter is still under consideration and we sincerely hope it will soon be settled.

Undelivered Copies.—Kindly read our "Business Notices." If a post-card notifying delay in receiving the *Record* is not sent us in time, we can take no action thereon, owing to postal rules.

A. H. L. (Vizianagram).—Please fill up the application form to be found in the I. M. Association's advertisement in the *Record* in your own handwriting, and we shall be glad to have you proposed and elected.

W. C. McM.—Make a strenuous effort to get British qualifications.

Assistant Surgeon (Oudh).—The representation is being considered.

E. D. B. (Lucknow) writes to say he has a specific for leprosy, and would like it tried by those interested in the subject. We would advise his sending a supply of the "specific" to Dr. Carleton, Superintendent of the Leper Asylum at Subathu.

C. A. N. (1)—For the requirements of the M. R. C. S. Eng., see the *Medical Register and Directory of the India Empire*, to be had from this office. (2) A graduate of an Indian University can claim exemption from the junior professional examination of the M. R. C. S. diploma, by virtue of his L. M. S. or M. B. from India. (3) An Indian graduate ought to pass any British examination and be back in India within six months at the most. He might do it in four months easily. Rs. 4,000 to 5,000 ought to cover all expenses. (4) Electrical therapeutics can be studied in any British school.

ACKNOWLEDGMENTS.

We have much pleasure in acknowledging the following Literary Contributions and Letters from:—Brig.-Surgn. Lieut.-Col. Kenneth Macleod, M.A., M.D., LL.D., F.R.C.S. England; S. J. Mullens, C.M.S., Srivilliputur; Rai Bahadur Meher Chud L.M.S., Amritsar; R. P. Banerji, B.A., G.B.M.S.L., Rajputana; Brig.-Surgn. Lieut.-Col. G. Kidg. M.B., LL.D., F.R.S., C.I.E., Calcutta; Surgn.-Capt. Patrick Hehlr, M.D., F.R.S.E., F.R.C.M.S., D.P.H., Hyderabad; Edward Balm, C.M.S., Hyderabad; Michael Tindale, C.M.S., Chinnab; K. K. Velu, C.M.S., Calicut; Z. Feldstein, M.D., Calcutta; Geo. Pogose, M.D., Calcutta; Yelliah Nidu, G.B.M.S., Ellichpur; and others.

APOPLEXY.

APOPLEXY occurring in early adult life is much more frequently due to syphilis than embolism, and syphilis is a factor in a third of all apoplexies, at least in large cities. Apoplexies are increasing in disproportionate frequency. The disease does not especially affect brain workers if they live temperately, but rather spares them. An attack is sometimes a conservative agent, calling a halt to excessive activity and intemperate living, and actually prolonging life. About one-fourth of those stricken with apoplexy die from the attack (hemorrhages being the most dangerous, thromboses, especially syphilitic, being least so). The average duration of life of those who have and survive one shock is over five years. The chances of a second attack before the fourth year are always considerable, yet do not amount to fifty per cent. and are inconsiderable so far as hemorrhages are concerned. Thromboses are much more apt to recur than hemorrhages.—DANA in *N. Y. Med. Rec.*

TREATMENT OF GONORRHOEA.

THE results reached in the treatment of these cases seem to warrant, according to DR. CHRISTIAN, of Philadelphia, the following conclusions: 1. That irrigation is a distinct advance in the treatment of gonorrhoea; in fact, up to a certain point it must be considered the proper treatment for that disease. It relieves *ardor urinae* and chills more promptly than any other form of treatment. It is attended with a much smaller proportion of complications such as total urethritis and epididymitis. 2. That permanganate of potassium is the best remedy for the purpose of urethral irrigation. 3. That irrigation alone cannot be relied upon to absolutely cure specific urethritis. For the cure of the thin mucopurulent discharge which appears at the meatus in the morning, some astringent injection used by the patient himself is necessary. 4. That simple non-infectious urethritis can be cured in from ten to twelve days by daily irrigations with permanganate of potassium. The writer is of the opinion that, where it is possible to carry out irrigation of the urethra with permanganate of potassium solution twice daily, this procedure very materially lessens the duration of the disease. The solutions used were as follows: bichloride of mercury, 1 to 15,000, increasing the second week to 1 to 8,000; nitrate of silver, 1 to 6,000, increasing to 1 to 3,000; permanganate of potassium, 1 to 4,000, increasing to 1 to 2,000; trikresol, one-half to one per cent.—*Therapeutic Gazette*.

TRANSPPOSITION OF VISCERA.

Dr. H. J. Herrick reports a case of *transposition of the viscera* in a German labourer set 25, at present in the Lakeside Hospital. His spleen could not be made out, and his stomach appears to have changed place with his liver, which latter was in perfect position and normal, except that it was on the left side. His heart is normal in size and correctly placed, save that it is on the right side, and the apex-beat is in the fifth intercostal space, and about an inch from the nipple toward the median line.

GREEN ASCITIC FLUID.

An Italian, presenting every one of the symptoms of *ascites*, consulted Dr. Marcello Hartwig, who forthwith tapped him removing over five quarts of an intensely green liquid containing large quantities of bile, bilirubin, fatty round cells, and a few eggs belonging to either *ascaris* or *tenia*. A second tapping was made five weeks afterward and proper drainage applied. The progress of the patient and the history during recovery established the fact that he was suffering from an *echinococcus cyst stimulating ascites* and communicating with a bile duct in the liver.

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